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SANITATION AT PANAMA

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Before going directly into the question of sanitation at Panama I think it would be well to tell something of the geography of the locality, and to dwell somewhat on a few other points.

I am frequently asked how the work is getting on at Panama, and if it is really as far advanced as the papers report. As far as I can judge, what the papers say about represents the condition of affairs. The chief engineer states that he will be ready to pass ships through the canal by the fall of 1913, and that it will be formally opened by Jan. 1, 1915.

It is not generally appreciated that if a line were to be drawn straight south from the United States through Panama, this line would barely touch Ecuador and would in general fall well west of South America. In other words, South America is altogether east of North America in longitude. This causes the isthmus connecting the two continents to run in a general direction from east to west.

The Pacific Ocean, south of this isthmus, was known to the early explorers as the South Sea, and the Caribbean, lying to the north, as the North Sea. The canal runs from Colon on the North Sea to Panama on the South Sea. Panama, in latitude, is thirty miles south of Colon and, in longitude, thirty miles east of Colon.

It is not really a canal which the government is building at Panama, but a waterway consisting of lakes, locks, canal- and sea-approaches. In selecting this location the lowest point in the mountain range extending from Alaska to Patagonia was found to be at Panama, where the mountains run east and west. Then the river on the north and the river on the south which had their source nearest this low point, in the back-bone of the mountain range, were located. These rivers were dammed, forming lakes; these lakes were connected through this lowest point in the mountain range by a deep cut; locks were placed in these dams so that ships could be raised into the lakes or lowered from the lakes; and then, lastly, approaches were cut from the North Sea on the north to the dam across the northern river, and likewise from the South Sea on the south to the dam across the southern river. This is the waterway being built by our government across the Isthmus of Panama. A ship coming from the north will sail south through the northern approach, seven miles to the northern locks, and there she will be lifted 85 feet to the surface of the southern lakes; she will then sail 24 miles south through the northern lake, then 9 miles through the cut connecting the two lakes; then she will be dropped 30 feet into the southern lake, then sail 2 miles through this southern lake, then be dropped through locks 55 feet from the lake level to the level of the South Sea, and then sail 8 miles through the southern approach to the South Sea. If it were being contemplated to connect Los Angeles and New Orleans by canal, and a similar plan were adopted, we would proceed as follows: Place a dam in the Mississippi River for the purpose of backing the waters of this river to the foot-hills of the Rockies on the east; then another dam in the Colorado River for the purpose of backing its waters to the foot-hills of the Rockies on the west. We would now have two great lakes, one to the east of the Rockies and the other to the west. Connect these lakes by a cut through the lowest point in the Rockies; put locks in the two dams, connect these two locks by waterway with the Pacific, on the west, and the Gulf of Mexico, on the east, and we have a waterway exactly similar to the waterway connecting the North and South seas at the Isthmus of Panama.

The health conditions at Panama when the United States took charge, in 1904, were very bad. For four hundred years this isthmus had been considered the most unhealthy spot in the world and the mortality records will sustain this opinion. The official pilot chart, in 1903, says:

> **The Panama Canal District is one of the hottest, wettest and most feverish regions in existence. Intermittent and malignant fevers are prevalent, and there is an epidemic of yellow fever at times. The death-rate under normal conditions is large.[1]**

From 1520, the year in which the route across the Isthmus was first established, to 1820, when South America threw off the Spanish yoke, the Isthmus of Panama was the chief route of travel between the western coast of North and South America and Spain. Most of the travel to and from the Philippines also came and went by this route. During all this time a constant stream of Spaniards was always passing through Panama. These Spaniards, in general unacclimated persons who had to remain some time waiting on vessels, paid a heavy toll to yellow fever, malarial fever and dysentery, the endemic diseases of Panama. As these travelers were often the highest officials of Spain their death caused wide comment throughout Europe and gave Panama the deservedly bad reputation which she obtained at this time.

From 1820 to the discovery of gold in California, in 1849, the Isthmus was not so much used as a point of transit, but on the discovery of gold, unacclimated Anglo-Saxons by the thousands flocked to the Isthmus for passage to California. They suffered from the endemic diseases of the Isthmus just as did their predecessors, the Spaniards. The unsavory reputation of

1. West India Pilot, Ed. 6, 1903, I.

the Isthmus was still further enhanced. In 1853, the Fourth Infantry of the United States Army was sent from eastern United States to California. They went by way of the Isthmus of Panama. General Grant was at the time quartermaster of the regiment. The railroad was completed at this time only about half way across, so that the regiment had to march from Gorgona to Panama. From the time they left Colon to the time when they reached San Francisco they lost eighty men out of a strength of 810. The present railroad across the Isthmus was under construction from 1850 to 1855. During this period the mortality was so great that several times construction had to stop because the laboring force had died or were sick. No statistics were retained concerning this period, so we can judge of conditions only from individual instances. At one time the construction company imported 1,000 negroes from the West Coast of Africa, and within six months these had all died off. At another time, for the same reasons, they brought over 1,000 Chinamen and within six months these had died off. One of the stations, at present, on the Panama Railroad is named Matachin. The tradition is that this name is derived from the Spanish words *mata*, "killed," and *Chin*, "Chinamen," because this was the point where the thousand Chinamen were housed and where most of them died.

During the period from 1881 to 1889, when the work on the French canal was at its maximum, unacclimated persons again came to the Isthmus in large numbers. The mortality among them was excessive. For this period it is again difficult to give accurate statistics. The French were building their canal through Columbian territory and they had no more police control of the adjacent country than a railroad contractor would have over the country through which his railroad passed if he were building a railroad in any one of the United States. We would simply know that Sam Smith was on his rolls and working for him on Wednesday and that on Thursday he was absent. Whether Smith had died or gone to work for someone else the contractor would have no means of finding out. This was the case with the French at Panama.

They had a most excellent system of hospitals where the sick were well taken care of; and we have the well-kept records of these hospitals. They show that during the construction period of the old French company, from 1881 to 1889, 5,618 employees died in these hospitals. But the French were, at this time, doing their work by contract and each contractor was charged a dollar per day for each man he had in hospital. It will readily be understood, therefore, that if the French contractor were anything like the ordinary contractor, not a very large proportion of the sick would go to this hospital. We hear of many individual instances of heavy loss. The first French director, Mr. Dingler, came to the Isthmus with his wife and three children. At the end of the first six months all had died of yellow fever except himself. One of the French engineers, who was still on the Isthmus when we first arrived, stated that he came over with a party of seventeen young Frenchmen. In a month they had all died of yellow fever except himself. The superintendent of the railroad brought to the Isthmus his three sisters; within a month they had all died of yellow fever. The Mother Superior of the sisters nursing in Ancon Hospital told me that she had come out with twenty-four sisters. Within a few years twenty-one had died, the most of yellow fever. Many other instances of this kind could be cited.

From the best information which I can get, and which I consider accurate, I believe the French lost 22,189 laborers by death from 1881 to 1889. This would give a rate of something over 240 per thousand per year. I think it due to the French to say that we could not have done a bit better than they, if we had known no more of the cause of these tropical diseases than they did.

The great discoveries in tropical medicine made during the time between the coming of the French to the Isthmus and the coming of ourselves, however, namely that certain species of mosquito transmit both yellow fever and malarial fevers, has enabled us to protect ourselves against these and other tropical diseases.

The French, with an average force of not more than 10,200 men, lost in nine years 22,189 men; we ourselves, with an average force of 33,000 men, in nearly the same length of time have lost less than 4,000. The death-rate among the French employees was something more than 240 per thousand; our maximum rate in the early days was 40 per thousand; our rate at present is 7.50 per thousand. Malaria, from a maximum of 821 per thousand taken sick—i. e., that, out of every thousand of our employees in the course of the year, we have 821 taken sick with malaria—we have reduced at present to 187 per thousand. But most important of all, yellow fever has been entirely banished. We have not had a single case since May, 1906, now a lapse of almost six years. The general death-rate has been reduced from a maximum of 49.94 per thousand to a rate, for the year 1910, of 21.18 per thousand. Such a rate compares favorably with that of many parts of the United States.

Now, as to what these results have cost, two syndicate writers from the United States have attacked the Sanitary Department very vigorously on the score of expense. One of these writers stated that while great results had been accomplished at Panama in the line of health, it was at the result of enormous expenditure; that sanitation had cost some two million dollars per year; that if the same sum were spent per population in the United States for health, that country would now be spending at the rate of $1,200,000,000 for sanitation; that if the United States were to spend the same on health matters, according to area, as is spent on the Isthmus, the sum would amount to the enormous figure of $12,000,000,000. Neither of these writers, however, got their figures from the chief sanitary office and both are entirely in error as to their statements.

The expenses of sanitation on the Isthmus have amounted to about $365,000 per year; one of the writers stated that it was $2,000,000. Now take the population of the United States at 90,000,000, and the population of the Zone at 150,000. If the United States spent in the same ratio as we do on the Zone the expenditure would be $219,000,000; the writer stated $1,200,000,000.

If the expenditure were in the ratio of area, the area of the United States being 3,500,000 square miles, and the area of the Zone being 500 square miles, the health expenditures in the United States would amount to two billions; the writer, just cited, said that they would amount to twelve billions.

It would be interesting to be able to tell just what the United States does spend on health. It is very difficult to give figures for the whole country on this subject, but we can approximate it. Take the health department of Chicago, for which the appropriation this year is $600,000. The work of this department covers neither foreign quarantine nor mosquito work; the large bulk of our health expenditures on the Isthmus are for these

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two items. For the purposes for which Chicago health department spends $600,000, we on the Isthmus spend about $50,000. If the whole of the United States spent on these items in the same ratio that Chicago does, the present expenditure of the country would be $27,000,000. If the United States spent in the same ratio as we do on the Zone, their expenditure would be $30,000,000. That is, we on the Isthmus spend one-tenth more per capita on these subjects than is spent in the United States for the same purposes.

This is not extravagant, I think, when the difficulties under which we have labored are considered.

An extract from an address of one of the highest railroad officials in the United States has recently been quoted to me. This official stated that the sanitary expenditures on the Isthmus would have been 5 per cent. of the total cost when the canal had been finished; that he thought that the sanitary results accomplished had been worth many times the amount spent, and that he believed that these same measures would, as a matter of economy, be adopted in all future works of this kind. How much more emphatic might he have been if he had known that, instead of costing 5 per cent. of the total appropriation, they had actually cost less than 1 per cent. of the total appropriation for all purposes.

But what I wish particularly to emphasize is this: that while the great works in the tropical sanitation, of Laveran, Ross, Reed, Finlay, Carter and many others, have enabled the sanitary department on the Isthmus to take a vital part in the work of building the canal, this is not the greatest good that we hope, and expect, will flow from this conspicuous object-lesson. We hope that our success at Panama will induce other tropical countries to try the same measures; and that thereby gradually all the tropics will be redeemed and made a suitable habitation for the white man.

But if this is to come about, it must be shown that it can be done at reasonable cost, and within the moderate means of these tropical regions. And such statements as have been made by these writers, and given wide circulation by means of syndicate letters for all the leading newspapers, must not be allowed to pass entirely uncontroverted.

I therefore wish to say most emphatically that considering the results and difficulties surrounding the subject, the sanitation of Panama has not been costly. When the canal shall have been finished it can be shown that sanitation cost about $365,000 per year. For a population of 150,000 this means an expenditure of about 1 per cent. per capita per day for each individual, and this sum is well within the means of any tropical country.

Glanders.—A thorough study of the complement fixation method in the diagnosis of equine glanders by the Bureau of Animal Industry, reported by John R. Mohler at the Washington meeting of the Society of American Bacteriologists, December 27-29 (*Science*), demonstrated that it may be considered a specific test. The results obtained supported the contention of Schutz and Schubert in their recommendation that it be taken as the official test by the German government. Even very small quantities of glanders antibodies can be detected by this method, and it is only in their presence and that of a glanders antigen that the specific reaction occurs. As glanders is sometimes communicated to human beings and then is a very formidable disease, these facts may have considerably more than a veterinary interest.

THE PRESENT STATUS OF PSYCHOLOGY IN MEDICAL EDUCATION AND PRACTICE*

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Three or four decades ago a couple of courses in a medical school, followed or accompanied by visits to the patients of a practicing physician, sufficed to produce a doctor of medicine. At that time almost all that a medical school afforded was an opportunity for the work of dissection and a convenient place to take certain courses and see demonstrations in chemistry and materia medica. Other subjects were gradually introduced into the curriculum, until at the present time four years' study is required, approximating four thousand hours of didactic and laboratory instruction. The traditions of an anatomic character have, however, not entirely changed. Much attention has been and is now paid to studies involving the structure of the body, although, within the past few years, the requirements have been expanded in those subjects which deal with function. It is a gratifying evidence of the advance of the functional standpoint in medicine that such a discussion as that of to-day can be held, with practicing physicians and medical educators taking part.

Not many years ago the subject of psychology was considered to have little relation to matters of practical endeavor. Even in connection with those medical topics which we now appreciate as having very close associations with psychology, there was more or less opposition, tacit if not open, to the consideration of psychologic matters. But, during the past five or ten years there has been a gradual turning, so that to-day the importance of an understanding of mental matters is more generally recognized. The reasons for this are numerous. The proportion of one insane to three hundred of the general population, which holds in most civilized communities, has served to indicate the importance of a knowledge of mental processes for the general practitioner as well as for the psychiatrist. The success, financial and therapeutic, of the non-medical healers (Christian Scientists, Mind Curists, Chiropractics, Emmanuelists, and others) has been only too evident, and, even though many of the faddy patients have eventually returned to be treated by medical practitioners, the success, only temporary, though it may be, of the psychologic procedures, has demonstrated the influence of the mind in the alleviation of abnormal conditions.

A more general realization of the occurrence of hysteriform, neurasthenic and degenerative mental states in the sick, the delinquents and the criminal, has also tended toward our appreciation of psychologic matters.

If we were to conclude that psychology has no place in the general scheme of medical education to-day, we should fall short of stating the truth. In a few schools, in which the force of certain individual professors has been felt, special courses dealing with psychology are offered or required as one of the requisites to the attainment of the medical degree. But, even in those other medical schools in which psychology as a topic has no place on the program, parts of the subject are taught in certain ways. A careful examination of text-books of

* This and the four following papers were read in a symposium on "The Relations of Psychology and Medical Education" before a joint session of the American Psychological Association and the Southern Society for Philosophy and Psychology, held at the Government Hospital for the Insane, Washington, D. C., Dec. 28, 1911.

physiology, of the practice of medicine, of neurology, and of psychiatry will show that, disguised or called by different names, mental states are discussed.

It is well recognized that much of the discussion of the so-called physiology of the sense-organs and of the cerebrum is a treatment of mental phenomena. Instead of the activities of the rods and cones, we have information regarding contrast, color sensations, and visual perceptions. Instead of a physiology of the Schneiderian membrane, the olfactory qualities are mentioned. Instead of the activities of the cerebral cells, percepts, images and associations are referred to. As it is given, this part of psychology is incomplete, and even though its psychologic character is often unassailable, it is often inadequate as a foundation for the abnormal psychology which is needed in the applied subjects of the medical curriculum.

In the courses in psychiatry, it is usual to give a brief summary of psychology, under the guise of general symptomatology, but when it is realized that the present requirement of the Association of American Medical Colleges regarding instruction in psychiatry is twenty hours, it is not difficult to understand that psychology must give way to the practical need of the enumeration of symptoms. It should also be noted that the requirements in this subject outlined for medical schools give no opportunity for didactic instruction, for this subject is placed on a purely clinical basis. In other words, no provision has been made for special instruction in psychology, even as allied to psychiatry, by those who force certain scheduled arrangements on the schools.

As justification for the time given to psychologic topics in certain medical courses, instructors have been wont to call attention to the fact that mind is a function of the brain, and that as such it is a part of physiology. But with equal weight it may be urged that chemistry is a part of physics and that these subjects should not be separated. Whatever theoretical viewpoint we may have of the relation of mental and bodily processes, it must be realized that psychology is now admitted to be a science, independent and not a part of physiology, psychiatry, or neurology. If it be admitted that it is essential for the student to be informed of the kinds of mental processes, the conditions under which they occur, and their interrelations, in order that he may have an adequate understanding of certain physiologic, neurologic, psychiatric, and therapeutic topics, it does not help matters to attempt to disregard psychology as a subject. It will not remedy the condition to shift the responsibility for its teaching to another department of the university, and the splitting of it into parts which are obviously disjointed is only a therapeutic makeshift.

The fact that psychology has to deal with the mental side of the life of an individual gives at once an indication of the place mental matters hold in medical practice. The physician depends on the mental processes of his patient for the information that will enable him to make a proper diagnosis. At the same time the accounts of the patients' sensations and feelings help the physician to appreciate or to evaluate the effect of the treatment which is instituted. In many cases the mental processes are the direct objects of consideration. They are sometimes the only symptoms which are to be observed, and they are the changed conditions which it is the function of the physician to alter.

It makes little difference what branch of medical practice we consider, we find that mental states must be taken into account by the practitioner, although he may not realize the importance of this psychologic aspect of his practice. For example, when a patient appears with a pain in his shoulder or in the thorax, or with a feeling of malaise, he approaches a physician because of these painful or disagreeable feelings. The patient may not know that the pain in the shoulder is due to some disturbance in the colon, or that the malaise is due to an infection or that it is psychic in origin. The patient realizes his abnormal feelings or sensations, and he consults the physician because of these. The physician tries, either by drugs or other physical means or by psychotherapeutic measures, to replace the abnormal sensations with those which are normal. The surgeon does much the same. It is his business to attempt by operative measures to relieve the patient of pain or discomfort. It is not necessary, however, that because of this the physician and surgeon should have an intimate acquaintance with psychologic research. In many cases the physician and the surgeon may well perform their duties without a knowledge that the symptoms for which they are consulted are mental. Psychology is, however, of greater import in other branches of medical practice. Here we should include many of the diseases commonly called "nervous" and all of those which are known as "mental." It is in connection with these diseases that a more intimate acquaintance with the facts and methods of psychology and of psychotherapeutics is necessary.

In the examination of the mentally abnormal, a knowledge of psychology, its results and its methods, is essential. It was formerly deemed sufficient to record observations which could be made by anyone without a knowledge of psychologic matters. It was deemed sufficiently accurate to note that the patient had delusions of grandeur, or that he had hallucinations or some other form of mental abnormality. But the introduction of experimental methods made it evident that certain conditions which were superficially alike might be fundamentally different from a psychologic point of view. To what extent these psychologic analyses are valuable for diagnosis and treatment, I shall not consider. The important fact is that these analyses tend to a better understanding of some of the symptoms, and in that way contribute to the sum of knowledge of the disease as a whole.

Psychologic knowledge is also of value in the treatment of diseases. The placebo has been a favorite remedy for generations and it has succeeded in curing many who did not need the most powerful alkaloids and other drugs. It is probable that many "cures" by chemical means are of the same character, i. e., mental. We are all probably aware of the results of Rivers' work on the pharmacologic action of alcohol and other poisons. These drugs were repeatedly reported to have marked effects on mental processes, but careful testing, by the application of psychologic principles, revealed the fact that the peculiar mental effects of these drugs were at times not to be found when the subjects were not aware that the drugs were being taken. In these and in other similar pharmacologic tests the mental effect of knowledge appears to be much greater than the chemical action of the drug.

The relation of psychology to psychotherapeutics is more commonly recognized, but the conceptions of psychology and of psychotherapeutics held by many practitioners of medicine are inadequate. A year or two ago, I listened to a surgeon read a paper on psychotherapeutics in which, after an hour, he summed up all of psychology and all of the therapeutic methods of mental

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medicine under the one topic of suggestion. An eminent neurologist in this country has grouped all the methods of psychotherapeutics into three different classes: hypnosis, suggestion and persuasion. He outlines a criticism against the tendency to believe in the supreme efficacy of one particular line of physical or chemical treatment, such as electricity or serum therapy, but fails to realize that the advocates of the universal use of such measures have been only as exclusive in their chemical and physical therapeutics as he has been in considering the psychic influences which may affect the diseased individual.

Not only suggestion but other individual methods of psychotherapy have been advocated as the panacea for all mental ills. At present it is the Freudian method, psycho-analysis. There is nothing new in the principles underlying this method. It is well known that it is an adaptation of association psychology to certain practical needs, and it appears to me unfortunate for both psychology and for psychotherapeutics that the devotees of this method, who deal with only a few of the types of mental disease, should write and talk of Freud's psychology as if Freud were responsible for a new kind of psychology or for a new system of mental science.

In relation to medical research the value of psychology is not as widely appreciated. That its methods are of value in the investigation of the mentally abnormal has been recognized for a number of years, but they have also been found useful in the investigations of physiologic and pharmacologic topics. The employment of psychologists in institutions for the insane, the feeble-minded and defectives has not become general, and is even rare when we consider the amount of time devoted to pathologic anatomy, for only in a few places has an endeavor been made to supplement the work of the pathologic laboratory by the addition of psychologic investigators.

From time to time those who have appreciated the possible value of psychology for medical purposes have questioned the value of present-day psychology. They ask for a psychology, not like that of the psychologist, but a psychology which may be applied toward the solution of their own problems, one which is aimed at practical ends. It has been assumed that psychology as it is being taught and investigated deals with matters of no concern, or of too abstract a nature, for practice. The exact form of the kind of psychology which is demanded, I do not know; but it appears that it should be a hybrid between the present laboratory psychology and medical practice. This kind of psychology we shall never attain until medical practitioners do more psychologizing and the psychologists become better acquainted with the problems of medical practice. The applications of a science must be made by those who utilize the science in a practical way; they usually cannot be made by those who have not a definite interest in the practical applications. Psychologists are, therefore, not directly at fault because of the lack of this application, any more than the physiologic chemist is at fault because he does not directly apply his results in a therapeutic way. A kind of psychology which is needed is that of every-day people, not only that of the trained investigator. Psychologists might provide this, but they have not. It cannot be doubted, however, that some psychologists have hindered an understanding of and cooperation with medical problems, not only by their aloofness, but also by their "damn the practical side."

On the other hand, it has been assumed that the technical terms which the psychologists have used are too special for the practical ends of medicine, and other expressions have been interjected into medical literature which usually have no basis except the prejudice against the use of certain terms which are considered technical. These objections have come from many who would consider a similar procedure on their part in relation to histology absolutely unwarranted. Histologic methods and terms, however technical they may be, and anatomic names are things to be admitted and reckoned with, but apparently, psychology and its methods are somehow to be considered to be different.

It has been said that all of us are psychologists in a very practical way, inasmuch as we interpret the actions of others in terms of our own mental processes, and that, in as far as we interpret the actions rightly, we not only are good psychologists, but at the same time we are successful in our dealings with other men. Because we all have psychologic experience of this practical nature, it has been supposed by some that this is sufficient for all practical needs. It has been assumed that because each of us has a mind, each is able to observe and to record mental facts of value. It is just as unquestionable that each of us has a body, and that we are thereby able to observe and to add to the sum of human knowledge regarding the structures and functions of that body. We have the same, or nearly as much, casual knowledge of the elements of the body as we have of mental elements, and without an experience in analysis we are as capable of observing the functions of bodily parts as we are of observing the functions of a mental order.

There can be no doubt that much of the success of the followers of Christian Science, of "mind cures" and of other fads and fancies, has been due to their recognition of the psychologic factors in the mental life, even though this recognition has been reached by unscientific reasoning, and without special training. It has been largely because of the lack of recognition of the psychologic aspect of disease by the medical profession that non-medical healers have been denounced, but, as Prince rightly remarks, these should be looked on rather as an evidence of lack of medical insight. Those who have charge of medical education must realize that students of medicine should not be permitted to pass through their course of medical preparation without at least an elementary knowledge of mental processes. It is necessary that the graduate in medicine be prepared to appreciate the power of mind for health or illness; that he be given at least a view of mental conditions, signs and therapeutics; and that he be prepared to treat many individuals who now seek with success charlatans of all kinds.

THE VALUE OF PSYCHOLOGY IN PSYCHIATRY

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I must begin with a remark as to definition: We are considering the relationship of two fields of debatable connotation. Naturally to me the fixed part of the problem is psychiatry—i. e., the orderly and systematic description, analysis, differentiation and melioristic handling, either in terms of brain disease or in terms of Nature's experiment, of cases or conditions in which mental life is disturbed.

As the second part of the problem we have to discuss the psychology, which is the fixed point to most of you

and of which it is said that as to the contents of a book of psychology there is to-day no special doubt; we might then assume that our problem would be the value of such a psychology in psychiatry, either in a narrow sense of study and care of insanity or the wider sense given above.

The question must, however, arise and will be discussed to-day: Are there not psychologies of different scope and possibly psychologic problems in psychiatry as important as the psychologic problem to the teacher and investigator of so-called normal psychology? The next alternative here would be: Is this necessarily merely applied psychology? Or do we not have to speak of the general psychologic problem in a field presenting special experimental problems, situations and possibilities?

Most of us would probably shrink from a dogmatic psychology consisting of pure principles. The domain is the field of psychologic experience, and the science becomes specified according to the methods employed. On this point I feel strongly that psychology as a science must work with as many different types of method as are necessary to reduce the events to well-defined experiments of Nature. In other words, it must cope with the problems of introspection and also with the other problems dealing with the biologic, physiologic and even anatomic conditions of mental life. Without this an unwarrantable gap is left between psychology and the medical sciences.

Psychiatry inevitably has to deal with the mental facts presented by the patients. We call their conditions mental diseases because the mental activities are involved, either in a leading way or incidentally to disorders of non-mental functions of the organism such as metabolism, circulation or direct damage of the brain. As one deals with psychologic facts, it is, to say the very least, desirable, and I should say essential, that one should use such methods and standards as will pass muster in the light of the critical, or if you please, scientific observation of such facts. Whatever passes into the records as material concerning psychologic reactions should be fit to represent a sufficient and accurate record of the events.

There was a day when the mental manifestations were overrated and misinterpreted in a system of archaic conceptions of chiefly moralizing character in many ways quite remote from actual psychology, i. e., from the laws and conditions of behavior and mentation. We often hear Heinroth quoted as the archfiend acting against good sense and science, owing to his emphasis on sin. He used psychology as it existed in his days with its moralizing standards of qualitative valuation of the reactions of his patients. Then came a period when practically everybody believed that psychology at its best could serve only in description and for symptomatology, furnishing merely highly untrustworthy "signs" of "real diseases back of the symptoms." Huxley's view of mental life as an epiphenomenon rests on this same standpoint. The average physician who insists on translating the plain functional facts into neurone-mythology practices systematically mere neurologizing tautology. To-day we fail to see exclusive sense in either extreme. We describe facts in terms of objective observation, but often in the form of functional valuation and in terms of utterances or expressions and automatic or volitional activities and reactions, which we are forced to treat as a record of psychologic material; and we also use and induce reactions such as suggestion or habit-training or helps in clearing up mental tangles, directly as dynamic agencies in the readjustment of a normal course of mental life of our patients.

The evolution of psychiatric literature gives little clearness in this matter, because for various reasons the issues are slurred over, or, to put it more correctly, not yet clearly in sight.

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In speaking of "mental integrations" I imply the whole of our attitudes and activities, including the respiratory and vasomotor and circulatory and cerebral activity involved, and also the situation in which the reaction takes place as a process of adjustment. The "integrations of the nervous system" would thus form an essential link in the broader "integration of the personality."

Our first task is to make ourselves and our students describe critically and correctly whatever involves the reactions of the type of behavior and other objective manifestations of mental activity. This is no small task even with students who pretend to have some training in psychology, since it usually was psychology of a less matter-of-fact type, and the students do not necessarily know how to use the foot-measure of simple observation through having used the chronoscope. Our first problem is to learn to describe ordinary events of behavior, and the description must as far as possible render the facts so that if the same conditions were reproduced, we should be forced to expect the same results, whether they be normal or abnormal, such as an automatic or peculiar act, or evidence of amnesia, or an obsession or a delusion or a delusional system or a wave of depression or what not. We must be able to see an event as an experiment of Nature, study the conditions, the modifiability, the rôle of the various integrated parts of the event and the probable mode of dynamic hanging together of the facts; and this is a thing to be acquired by practice in concrete situations.

To my mind, psychopathology and psychology have to study mental events and their settings and their effects in terms of activities of behavior. There may be a psychology for any one teacher's or investigator's sake divested of all but the introspective considerations: to us physicians psychopathology and psychology demand studies with a clear command of the biologic settings and a definite sizing up of the mental dynamics and also of the non-mental dynamic factors. This gives all the desirable space to the most microscopic introspective analysis and to any other lines of interest; and it will be up to the devotees of the various standpoints to bring forth types of work which will make themselves acceptable and inspiring to the workers who must live with a psychology which works and lives rather than a psychology easy to teach or easy to write.

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Within the field of studying psychopathologic cases and branching off from it there are many lines of psychologic research and training which the medical student will learn to acquire with interest, not as amplification of the obvious and sheer accumulation of details, but as a clearing of issues striking at the very roots of the dynamics and of the estimates in the field in which he works. As long as he makes it a rule, as far as possible, to record events together with the conditions under which they arise, the description of the event, and the results, and a sizing up of the time and of the influences needed for a readjustment of a state of balance, the worker is on the safe side and sure to record valuable material, no matter how complex the facts may be from the point of view of a detailed analysis in terms of structural psychology.

But even if the time had not come for a recasting of issues toward dynamics, there are many lines of psychologic estimates and modifications of mental states by non-mental or mental agencies equally interesting to the various types of psychology. Look at the Binet tests and at the methods outlined by Sommer, Franz and many others. I am confident that Dr. Watson will outline fruitful lines of psychologic training which we shall all welcome whether we agree on all the above tendencies or not.

Summing up the situation, I wish to emphasize my view that psychology will become a much more real issue when it aims to guide students in the correct and critical recording of the plain facts of conduct and behavior and the mechanisms at work, and when it does more to encourage them to take the common-sense attitude about psychology; when it puts the emphasis on what shows objectively as well as subjectively, namely, the conditions, types and results of mental activity; when it trains the student to see, in the special psychologic methods, methods of accuracy and greater comparability; but above all, when the data can be formulated in terms of adaptations of a living functioning organism with the system of mental integrations—the conditions and structure of which are becoming increasingly better understood. The student should learn that psychology is the study of a certain type of reactions, of the conditions under which they occur, of what they do and how they can be modified and kept from miscarriage. How to use the reactions either as mere signs of broader disorders, or as dynamic factors, must be learned in the study of cases and by experimentation. In this connection I should urge that we avoid depriving the field of its freshness and concreteness in courses to undergraduates by teaching abstract systems of psychopathology merely illustrated by the parade cases of the literature, and leaving them with dyspepsia when confronted with our plain hospital cases and the less sensational disorders. It is equally uncalled for to describe psychopathology merely as "applied psychology." We do not call pathology "applied physiology," or autopsy work "applied pathology." For the establishment of some fundamental facts the simple autopsy is sufficient; for others it is the starting-point of deeper work, possibly demanding an experimental reconstruction of the facts. In psychiatry the so-called clinical observation and clinical conversation and routine examination with its record in questions and answers is the basis for the various ramifications, and the more we cultivate safety in these ordinary starting-points the

and of which it is said that as to the contents of a book of psychology there is to-day no special doubt; we might then assume that our problem would be the value of such a psychology in psychiatry, either in a narrow sense of study and care of insanity or the wider sense given above.

The question must, however, arise and will be discussed to-day: Are there not psychologies of different scope and possibly psychologic problems in psychiatry as important as the psychologic problem to the teacher and investigator of so-called normal psychology? The next alternative here would be: Is this necessarily merely applied psychology? Or do we not have to speak of the general psychologic problem in a field presenting special experimental problems, situations and possibilities?

Most of us would probably shrink from a dogmatic psychology consisting of pure principles. The domain is the field of psychologic experience, and the science becomes specified according to the methods employed. On this point I feel strongly that psychology as a science must work with as many different types of method as are necessary to reduce the events to well-defined experiments of Nature. In other words, it must cope with the problems of introspection and also with the other problems dealing with the biologic, physiologic and even anatomic conditions of mental life. Without this an unwarrantable gap is left between psychology and the medical sciences.

Psychiatry inevitably has to deal with the mental facts presented by the patients. We call their conditions mental diseases because the mental activities are involved, either in a leading way or incidentally to disorders of non-mental functions of the organism such as metabolism, circulation or direct damage of the brain. As one deals with psychologic facts, it is, to say the very least, desirable, and I should say essential, that one should use such methods and standards as will pass muster in the light of the critical, or if you please, scientific observation of such facts. Whatever passes into the records as material concerning psychologic reactions should be fit to represent a sufficient and accurate record of the events.

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safer our position. Psychopathology is not applied psychology. It is a field from which psychology may expect just as much broadening out as psychopathology can expect help and experience from the methods of so-called pure psychology. If, for instance, we can work with dynamic principles in psychopathology, all the better for psychology as a whole; but even on neutral ground with methods already current in psychology, valuable collaboration is possible and offering friendly companionship of interests.

I repeat: Psychology is the only field of experience from which we can get the proper designation and understanding of many reactions which we must learn to describe, to differentiate, to understand for the conditions under which they arise, for the share played by the different integrative factors of the reaction as a whole, for a reduction to terms of an experiment of Nature and for the study of its modifiability. Even in its most dogmatic form psychology offers methods and precautions to our workers; and the more we shall learn to know where we can safely depend on qualitative tests of our reactions and where quantitative tests are possible and worth while and the more we shall use the dynamic aspects of the facts, the greater will be the appreciation of a demand for psychology on the part of medical students. Psychopathology is not merely applied psychology, but can be a legitimate and fruitful field of psychology at its best.

On this ground, it would seem desirable to have a member of the staff in psychopathology add to the course on physiology an outline of psychology of normal life, and to the course in pathology an outline of psychopathologic fundamental experiments and reaction-types, so that when psychiatry is introduced, the student has a first-hand experience with the fundamental facts and methods as outlined by Dr. Watson and Dr. Prince.

PSYCHOPATHOLOGY AND NEUROPATHOLOGY: THE PROBLEMS OF TEACHING AND RESEARCH CONTRASTED

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The ideas that I wish to bring to this symposium are few, and I hope not too unorthodox. How shall research psychology and research medicine come together, on what ground, and to what ends? I wish (1) to insist strongly on the unique value of the pathologic method, not merely for the diagnostic and therapeutic purposes of medicine, but for biology as a whole and for the most vital of biologic sciences, psychology. I wish (2) to point out how pernicious in research may be the dogmatic insistence on the doctrine of psychophysical parallelism in medical or premedical courses in psychology—pernicious because it inhibits the free interchange of structural and functional concepts and the passage to and fro of workers in the several sciences. I wish (3) to show that psychology and physiology have more in common than either has with such structural sciences as anatomy and histology, and that the main common element of both mental and cerebral processes is the time-element as against the space-element of the structural sciences. On this ground (4) I conceive that the mind-twist and brain-spot hypotheses for the explanation of certain forms of mental disease are entirely consistent with each other, since from a different angle each is dealing with the same facts. Above all (5), let us not divide up the tasks of research as we divide up the tasks of teaching, since research, looking to the future, defies the compartments of the past.

> "It always leads to a better understanding of a thing's significance," wrote W. James, "to consider its exaggerations and perversions, its equivalents and substitutes and nearest relatives elsewhere. . . . Insane conditions have this advantage, that they isolate special factors of the mental life. . . . The study of hallucinations has in this way been for psychologists the key to their comprehension of normal sensation, that of illusions has been the key to the right comprehension of perception. Morbid impulses and imperative conceptions, 'fixed ideas,' so-called, have thrown a flood of light on the psychology of the normal will; and obsessions and delusions have performed the same service for that of the normal faculty of belief."[1]

It is perhaps in such complex fields as this that the natural analyses effected by disease possess their widest scope. Even where more artificial analysis is possible, the pathologic method has often yielded the most fortunate short cuts. One of the richest generalizations of biology at large (the dictum *omnis cellula e cellula*) could hardly have been achieved without decades of labor by a commission of biologists empowered to study normal cells, and only normal cells. The utilization of abnormal material gave a long-range induction almost at once. The pathologic foundation of the doctrine of evolution is obvious to anyone who considers what survival of the fit means in terms of the unfit. The doctrines of immunity derive an indispensable constituent from the law of regeneration in surplus, which Weigert observed in his studies of interstitial tissue. The bacteriology of disease has afforded some of the shortest cuts and the longest new ranges of thought of which we know or can conceive. The more complex the subject of our study, the less progress do we make by confining our attention to the normal presentment of that object. Normality is baffling, like the roc's egg to the climbing Sinbad. A niche, a wedge, fragmentation, dissection, division of intellectual labor, all the screening and sifting which lie at the basis of experimentation, these characterize the method of pathology, which pays small heed to the pedagogic divisions of any former stage of a given science. The research pathologist follows the trail of the concrete through whatever ranges of the abstract become necessary, and through no others.

It is here that the school divisions of psychology and brain physiology, of psychology and brain anatomy, of brain physiology and brain anatomy, of anthropology and social statistics, of sociology and criminal anthropology, and a host of other abstract school divisions have entered to divert the research worker from his duty to the concrete complexity.

Particularly dangerous I find to be certain school tendencies born of the doctrine of psychophysical parallelism. The teacher of psychology desires to keep *mind* logically distinct from *body;* the teacher of physiology disclaims expert knowledge of psychology; the teacher of brain anatomy almost skilfully avoids giving his point of view about anything remotely functional.

The student grows to a feeling that the confines and septa of pedagogy are the confines and septa of research. For the development of psychopathology and of neuropathology, which I consider to be school divisions of knowledge of no ultimate logical importance, no other

1. James, W.: Varieties of Religious Experience.

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single doctrine has, to my thinking, been so pernicious as the doctrine which proposes to separate mind and body before we know much about either.

Most of us remember James' neat criticism of the *ohne Phosphor, kein Gedanke* psychology. "The phosphorus-philosophers," said James, "have often compared thought to a secretion. 'The brain secretes thought as the kidneys urine, or as the liver secretes bile,' are phrases which one sometimes hears. The lame analogy need hardly be pointed out. . . . We know of nothing connected with liver- and kidney-activity which can be in the remotest degree compared with the stream of thought that accompanies the brain's material secretions."

I remember smiling as a college student at the folly of these phosphorus men, thus dispatched at a blow. The fact is, a friend explained to me, *ohne Gedanke, kein Phosphor*. Thereafter I was not long in succumbing to the artistic simplicity of idealism.

It took me many years to learn that neither phosphorus, etc., nor the streams of thought could be dealt with so simply.

The proportions:

Brain : Thought : : Liver : Bile

or

Brain : Thought : : Kidney : Urine

are obviously fallacious; but, if we alter the proportions slightly to

Brain : Process of Thinking : : Liver : Process of Secreting

and

Brain : Process of Thinking : : Kidney : Process of Excreting

we have destroyed the fallacy which James ridicules.

We find that liver- and kidney-activity have one important thing in common with the stream of thought — namely, activity itself, the temporal features of all processes whatever.

One more interactionist! I hear you say. No, I reply, that would hardly be fair. How can we prattle interaction, if we do not know the factors we declare to interact? These factors in the interaction-complex, I repeat, we simply do not adequately know either in the concrete or in the abstract.

If not a parallelist and not an interactionist, what remains for a student? Must he not relapse into crusty mere critique or cowardly agnosticism?

Some years ago I ventured from my chosen path of brain analysis in mental disease at large to a discussion of dementia præcox in particular. I found that practically everybody had taken sides. It had become a game. The hypothesis of psychic factors was strictly opposed to the hypothesis of encephalic factors. Tangles and twists in the mind appealed to some; blots and spots in the brain appealed to others.

Contrary to my presuppositions (I do not pretend to be exempt from presuppositions), I found in the brains of subjects suffering from something like dementia præcox, certain lesions, partly congenital anomalies, partly lesions acquired in the individual's life. I was led for the moment, and still feel the impulsion, to confide in the brain-spot hypothesis *for dementia præcox*.

Then the secret is out! The reader believes that there are compartments in mental disease such that mind-twists work here, brain-spots there? No, I reply, I am not so naive as that, nor are the facts so simple.

"They quote you," said a practical psychotherapeutist to me the other day, "to the effect that dementia præcox shows lesions, and is therefore incurable, and is anyhow not subject to my poor psychotherapeutic efforts."

"Who quote me?" said I.

"Why, the materialistic doctors of the clinic!"

This was the sequel of my well-meant endeavor to work on an apical problem! The facts are these: I am not convinced that we can safely entify dementia præcox in the first place. I am not sure that the anomalies and scleroses which I found are primary causes in the group. I am still less of the opinion that the changes are secondary to mental twists. I think the lesions are such as to interfere with proper cerebration, just as water on the knee interferes with proper walking.

"I have no objection to the lesions of dementia præcox, if you do not regard them as primary," wrote one friend to me. Precisely, I reply. The lesions are neither primary nor secondary. They, or the cell-arrangements involved, permit or purvey the symptoms and signs of dementia præcox. The same facts viewed from one aspect are structural, from another aspect functional. Structure is in the main the spatial aspect of facts and events, function in the main the temporal aspect of the same facts and events. To say that mind precedes matter, or matter precedes mind, is to say that time precedes space or space precedes time. If you look sharply at a frozen moment held as a sort of preterite before your eyes, you will hardly discover more than something structural. If you follow the object for a time, you will discern inner or outer changes in the object, qualitative, quantitative, positional, or relative, which entitle you to describe the object only in functional terms.

Brain-changes and mind-changes have at least this temporal aspect in common: Whether both types of change are concretely identical is for research to decide. Pedagogy, the logic of the past, can decide nothing of the sort. Both types of change in virtue of being changes *überhaupt*, are opposed to the structural, *ex hypothesi* unchanging, killed, fixed and mordanted objects which neurology describes.

Suppose then that *for teaching purposes* we keep structure and function apart; suppose we even go a step farther and, for teaching purposes, separate function into two kinds, cerebral and psychic: I maintain that in research we should let the facts lead us where they will, over the hills and dales of physiology, into the deep borings of anatomy, or upward into the ethereal reaches of psychology. We have already weakened the pedagogic boundaries of many ancient sciences, and by new surveys, protracted litigation, and a thoroughgoing disrespect for precedent *coram factis*, we may achieve shortly new boundaries.

The majority of cases of mental disease are, I am convinced by special studies, characterized by the occurrence of obvious brain-lesions, i. e., even in the present stage of science they possess a structural pathology. Do they therefore possess no functional pathology? Their possession of the two aspects is a truism. Should we not study both aspects?

Furthermore, suppose we learn that, whereas three-quarters of our cases of mental disease exhibit obvious irrecoverable brain-lesions, another quarter fails to show these. Suppose the methods of microscopic research should still fail to show in many cases essential or irreversible brain-lesions, should we not stultify ourselves if we did not abandon *for the research campaign* both that psychopathology which has taught us the main course of our disease and the neuropathology which has proved usefully negative? Should we not repair at once to the chemistry of metabolism, the physiology of internal

secretions, and the entire point of view of pharmacology? Discoveries in the latter fields, concrete and pertinent facts, would carry us back to the tissues and back to the processes of the nervous system, to neuropathology, structural and functional, and to psychopathology, and enlighten many dark corners therein. He who adheres to the classical problems as they lie within the teaching divisions of any science is not apt to change the face of that science.

37 Trowbridge Street.

CONTENT OF A COURSE IN PSYCHOLOGY FOR MEDICAL STUDENTS

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For several years I have been interested in the general subject of the relation of psychology to medicine. It has long been a dream of mine that some day, when conditions are more favorable than they are at present, I should be able to persuade all of the research students in psychology in my charge to take a large amount of their training in the medical school, if not the whole of the medical course. While such a desideratum seems to be not immediately realizable there are certain signs at present which seem to show that the medical schools in their turn are becoming interested in our work and are not averse to seeing a closer relationship established between psychology and medicine. I believe indeed that interest has been so far awakened that some of the medical schools are willing to change their curriculum to such an extent as to admit a course in psychology.

The functional and practical phases of psychology are now so much in the forefront of discussion that there is no need on my part to dwell on the increasing need that the medical student has for psychology. It has been this change within the aims and ideals of psychology itself which has made such a symposium as the present one possible. Psychology is ceasing to be a purely academic science and is now willing to study questions dealing with every-day life. This change in our ideas of what is of value in psychology has not been a sudden one, but even so, the knowledge of it is not so generally widespread among medical men as it might be.

The other papers in this symposium have not flattered psychology. They have shown that our psychologic texts and a good deal of the research work in psychology are not especially valuable for the medical man. From the tone of the writings of certain medical men one would think that the days of psychology are numbered because of the failure of the psychologist to make his work directly applicable to the needs of medical men and especially to those of the psychoanalysts. But surely this is expecting too much of psychology. As I look back on our work for the last few years and on our attempts to teach psychology I confess that my conscience fails to prick me as much as it might. Surely medicine should not and need not expect to find its psychologic tools ready-made. The psychologist has had to adapt his tools from those supplied by physics and physiology. The recent psycho-analytic movement in medicine adds another large territory to the province of psychology. Special tools are needed. So far psychology has not been given, in certain medical circles at least, the credit which is its due for furnishing even unsatisfactory tools and methods which might be adapted to the needs of this body of workers. Surely it is evident that the methods used by Freud, and especially those of Jung, have been borrowed from psychology. I feel now that since this borrowing has been effected, those men have accomplished so much with the methods that it now behooves the psychologist to borrow them back again to retest them and to readjust them for use in psychologic research. It is this give-and-take spirit—a willingness to borrow and to lend—which will aid most in furthering research in the fields bordering on both psychology and medicine. The psychologist, I believe, is far more willing to accept what psychotherapy and psycho-analysis can give him than the medical man following these lines is to accept what the psychologist has to offer.

The psycho-analyst to-day asserts his complete independence of psychology, he invents and assumes mental functions and mechanisms which, according to his point of view, cannot be subsumed under those now current in psychology, and has gone so far as to introduce a host of new terms relating to them into the already sinfully misused vocabulary of the psychiatrist. He speaks of "suppressed complexes," and "sexual traumas," acquired sometimes in very early life, as actual living conscious factors. These are assumed to have more importance for the ultimate development of behavior than all of the rest of the mass of habits which the subject has to form between youth (often childhood), when the suppression is supposed first to take place, and late adolescence when at the moment of "shock" the "suppression" becomes "effective." Probably the too ready attempt to make a complete and independent system of psycho-analysis and the failure on the part of the devotees of this new cult to maintain an intellectual freedom in their system have hindered a wide-spread and scientific study of the methods of Freud and Jung. This is a serious matter both for psychology and for medicine. I firmly believe that these methods contain within themselves the means of tremendously furthering medical practice, psychology and legal procedure.

But my purpose is not to criticize the methods of the psycho-analyst. Let me say this, however, as being apropos of the type of course which I would suggest for the medical students: The psycho-analyst is using methods in a very crude and unsatisfactory way. He is building an enormous structure without looking carefully at the foundations. So long as we are content to use such terms as "suppression," "substitution," "symbolism," "latent" and "manifest" content "psychic censors," and the like, without further analysis, we are showing a willingness to revert to a type of "faculty psychology" which is worse than that which Herbart overthrew. What the psychologist would have the research[1] psycho-analysts do is to give a careful statement in understandable terms of these processes of substitutions, sublimations and repressions. There is no question in my mind but that such phenomena when rightly understood are statable in terms of present-day psychology — in terms of memory processes, retention, habit formation, habit conflicts, etc. It is at this place that I believe normal psychology may offer the medical men crude tools which they themselves can readily fashion to suit their special needs and a terminology by means of which they can state their findings in such a way as to be intelligible to the psychologist.

1. I am fully aware of the fact that there is a body of medical writers and medical practitioners who are willing to accept and to use very crude methods without attempting every now and then to revise and to reconstruct them.

For some time we have been attempting at Johns Hopkins University to arrange for a closer relationship between work in the graduate school and the work in the medical school. As conditions now stand a student may obtain his Ph.D. degree in psychology and his medical degree in six years instead of seven, under certain conditions which I need not mention here. Furthermore, any of the medical men may take in the final fourth year an elective in psychology. With the coming of the psychiatric clinic this relationship will be made still closer.

In attempting to give my ideas on this subject a clearer statement, I feel handicapped by the existing disparity in the psychologic training of the medical men before they enter on their medical studies. I shall take it for granted now that the students in medicine have had in their premedical work the equivalent of at least a three-months' course in elementary psychology, having as a text-book some psychology like that of Angell, Judd, or Titchener.[2]

A second difficulty that hampers us is the way in which anatomy (especially neurology) and physiology are taught. I feel that too much time is given to anatomy or rather to the type of anatomy that we have taught in medical schools, and when I say this I feel that a good many of the professors of anatomy in the country will agree with me. The student comes out of his course in anatomy with very little notion of the way the structures work, with very little notion of the integrated systems of conduction in the nervous system; and when he gets to physiology his attention is again attracted to the details of organs and not to the way in which the organs work when put together. I say this in all humbleness. It would be presumptuous for me to attempt to reconstruct the first-year courses in anatomy and physiology for the medical student, but the need for some change is imperative if we are to find a place for psychology in the medical curriculum. I am more and more convinced that the nervous system is badly taught by the psychologist and that in the future it would be well for him not to have less knowledge of the nervous system, but to try to teach it less and to confine his teachings more to the psychologic material. I do not believe any psychologist really wants to teach sense-organ structure or the architecture of the central nervous system. He ought to realize, and I think he does, that these subjects can be better taught by the men who are responsible for research in them.

Having relieved my mind of some of the difficulties in the way of teaching psychology in the medical schools, I may say, further, that before the course I have in mind will ever become popular with the medical student there must come some change in the ideals fostered by his whole course of instruction. The medical student must be taught that no matter whether he is specializing in surgery, obstetrics or psychiatry, his subjects are human beings and not merely objects on which he may demonstrate his skill. This shift in his ideas of value will lead him to feel the need of psychologic training and to accept that training in the fields of habit formation, association, memory and emotion.

I suggest that the course should require three periods each week; two laboratory periods of two hours each and one lecture, the course to continue for one full year, proably as an elective in the third year. I think that this should represent the minimum of time which should be devoted to psychology in the medical school. If the laboratory work is to be touched on at all, then let us do the work with some degree of thoroughness. Unless this amount of time can be given over to the work I should favor simply a lecture course covering the more important topics in psychology. While I fully realize the fact that psychology and psychologists have more or less wasted an enormous amount of time on the topic of sensation, I feel, nevertheless, that some experiments should be given in the topic of sensation. I suggest, therefore, that inasmuch as the whole ground cannot be covered, we centralize our efforts in sensation on two senses—vision and hearing. With a proper apparatus for the mixing of spectral colors the work in color-vision, including the tests on color-blindness, can be accomplished in three weeks' time. If we have to send the student to the color-wheel and have him go through the endless mill described by Titchener, he will get discouraged and waste the better part of three months and still come out with a very limited knowledge of the main features in the study of vision.

The study of auditory sensation, in so far as its data would be valuable for the medical student, can likewise be completed in a short space of time. One needs for this work a good set of forks, the Edlemann's testing-forks, a set of differential forks—the siren, the Lehmann acoumeter and some of the more common pieces of apparatus which every psychologic laboratory now contains. By means of these simple instruments we could give the medical student a command of the method of testing limits of tone, tone islands, pitch differences, difference tones and the like. The lecture-work going along with the study of sensation should condense the work in the sense fields. It should confine itself to the data and should leave out of discussion the endless details of color theories, and theories of audition. The emphasis should be placed on the function and use of these two sense-organs and on the methods of studying them.

I think that this short course in sensation would give the medical student some notion of the proper setting and control of a psychologic experiment.

These experiments on the sense fields should, in my opinion, be followed by a thorough study with laboratory and clinical work of the Binet-Simon tests, this work to be supplemented on the experimental side by such studies as Thorndike is making on the "curve of work," initial spurts in work, spurts after interruption, end-spurts, etc. —in other words, by tests which show the part that fatigue, disturbances and emotional factors play in the normal on-going of mental work. Although the work on "fatigue" in the usual sense is in a chaotic condition at present, I am not sure that we are justified in leaving it out of our course. I have the feeling that if psychologists will interest themselves more in the acquisition and control of motor processes rather than in the "pattern" or "content of consciousness" when entering on studies in fatigue, there will be brought about a rehabilitation of the ergographic methods of experimentation which will be to the advantage both of psychology and medicine.

In my judgment this work on mental tests should be followed by experimental studies in the acquisition and retention of skilful acts; these studies should be made under several different sets of conditions. This type of experimentation, showing the different stages and methods of acquiring accommodations, the distribution of effort in learning, the short cuts in learning, etc.,

2. I entirely agree with the remarks made by Professor Angell in regard to the thoroughness of such an undergraduate course and the broad-minded way in which it should be conducted. It is, however, not feasible, even if advisable, to separate the undergraduate training in psychology of the medical men from that of the men who are to follow other vocations.

should be of tremendous interest to the psychiatrist. It paves the way for the normal understanding of lack of interest at certain stages of development (apathy as shown in "resting places" and "plateaus," the understanding of "bungling," and "conflicts," the stamping in and retention of wrong methods of response and the effect of emotional states on the acquisition and exercise of habit). Furthermore, it shows when properly conducted, even on adult subjects as no other form of experiment does, the complete transition from a random unskilful type of response (infantile) to one essentially automatic. Certainly no medical man should deem himself prepared to give instruction in the subjects of hypnosis and the "subconscious" without a somewhat extended training in the rise of normal automatisms.

Our medical student will be prepared by this time to enter intelligently on the study of the normal process of association, memory and retention. My plan would be to make these studies purely "objective"—a definite task should be set, words, phrases and various other material presented; then the time of learning under ordinary conditions and under conditions of excitement (obtained by "rushing," interruption, etc.), the rate of learning and the errors in learning should be measured as any other biologic function is measured. Retention after definite interval under both normal conditions and under conditions of strain and excitement should be tested in a similar manner. Memory in the narrower sense ("associations with time, place and emotional setting") can very easily be tested by the picture method or by presenting concrete situations—now largely used in Germany in the psychologic training of students of law.[3] Definite intervals are allowed to elapse and then the accuracy of reproduction is tested by allowing the observer to give oral or written statements. The work should be amplified by testing the effect on reproduction of the various ways in which questions may be put to the observer. The word-association method can be conveniently made use of in this type of memory study. If these experiments on association, memory and retention are at all thoroughly made they will not only yield the medical student the mastery of the technic in this extremely useful field, but will teach him how to handle his patient and to prepare an intelligent record of his case.[4]

I feel that the course should contain a few lectures and several experiments on normal reaction time. Without criticizing the refinements in the methods of the normal psychologist, I think we can safely admit that the medical student does not need to measure reaction times by units as small as a sigma. At the same time I am not in favor of putting a stop-watch in his hands without at the same time telling him a little about the factors which influence reaction times, their normal variability, especially in untrained subjects and the individual peculiarities of different subjects in this and other respects.

With this foundation in practical psychology (not "applied") I think we can safely turn the medical student interested in psychopathology and psycho-analysis over to the psychiatric clinic. There, surely, is the place for him to obtain his knowledge of hypnotism, multiple personalities, suggestion and aphasia.[5] Only in the clinic can be obtained the material for study; without the individual study of cases all the lecture work in the world is unavailing.

While there is no manual of psychology dealing expressly with the material needed by the medical student, I feel sure that such will be forthcoming at an early date if psychologists and medical men will agree specifically on the necessary content of such a book.

In conclusion I wish to express my appreciation of the work of the psychiatrists for the interesting possibilities of research and interpretation which they are affording the normal psychologist. It is largely by reason of the broad-minded character of the work of Adolf Meyer, Hoch, Freud and Jung that the normal psychologist has been forced out of his academic reserve and into an active participation in the work of psychopathology.

3. It has been a matter of interest to me that psycho-analysts have not more widely grasped the possibilities in this method for the unraveling of "suppressed complexes."

4. One of the incidental but not least valuable results from the experiments in association with nonsense material (Ebbinghaus) would be the demonstration to the medical student that there is always a normal process of forgetting occurring without the intrusion of suppressed sexual complexes. It would not be surprising either that if after he had learned a series of sixteen nonsense syllables and found that after a few hours he could not recall one of them but could relearn the series in one-third of the original time of learning, he should come to the conclusion that a good many things could be accomplished by the normal functioning of the nervous system without the necessity of positing a "conscious unconscious content"—the "subconscious" to aid it.

5. The only subject I should wish to have excluded as a special topic would be that of the "subconscious." Surely we gain nothing by this concept. We can study the visible and tangible effect of suppressions, tangles, conflicting habits and the like without positing a "subconscious." Personally I feel that the introduction of such a concept is as detrimental to the advance of psychology analysis as is the discussion of those philosophic remnants—psychophysical parallelism and interaction.

THE NEW PSYCHOLOGY AND THERAPEUTICS

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The point of this symposium, as I understand it, is the relation between normal psychology and medical education. If by normal psychology is meant that which is taught in the ordinary academic curriculum as expounded in the more commonly used text-books, the question is a very simple one. At least it is such if I, as a teacher and practitioner of medicine, correctly apprehend the problems of pathologic psychology. I say that it is a simple question for I am unable to see any particularly close relation between this kind of normal psychology and the problems of medicine, and particularly psychotherapy. I would not say that normal psychology as commonly taught has no value whatsoever for the student of psychopathology and for him who is concerned with the healing of the sick organism. That would be an extravagant statement. If one digs through a text-book of normal psychology one finds here and there some observation, some fact, some theory, some principle which is of help in elucidating a pathologic condition, or which one may make use of for therapeutic purposes. But I think I am right in saying that one discovers these bits of gold in a massive collection of useless bits of information, because one has learned to know their meaning and value from the knowledge gained by one's studies in abnormal conditions, and not the reverse; that is to say, one's understanding of pathologic processes has not been gained from a knowledge of normal psychology.

For the most part the mass of facts gained from normal psychology is useless for the understanding of medical problems which include both pathologic processes and practical therapeutics. The problems with which normal psychology concerns itself are of little interest

to practical medicine, and the principles which it involves are of little applicability to the problems involved in pathologic life. In other words, those processes, the disturbances of which are the manifestations of disease, are not the ones which normal psychology attempts to study and elucidate.

We learn in text-books a good deal about perceptions being selected groups of sensations and images, much of which any psychopathologist knows from his own observations, but of the important mechanism by which perception derives its meaning from the context, or associative processes, unconscious as well as conscious, we learn only so much as can be put in a few brief paragraphs.

We read long discussions as to whether feeling has one dimension, or two dimensions, or three or more dimensions; and we read a good deal about classifications of emotions; but we find almost nothing about the important part which feelings and emotions actually take in determining the processes of the mind. We find almost nothing of the mechanisms, conscious and unconscious, by which mental processes are driven in this direction or that by these effects. We read much about the nature and classification of instincts, but almost nothing of the mechanisms by which instincts determine conduct and the content of consciousness. We learn a good deal about memory-images, but almost nothing about memory as a mechanism which determines the building of complexes as an associative system which subconsciously determine the settings of our judgments, our attitudes and other mental processes; and we learn almost nothing of amnesia, one of the commonest of phenomena of everyday, as well as pathologic life. We learn a large mass of accumulated facts of conscious life, but nothing of the great subconscious life in which conscious processes find their sources and determining impulses. In short, normal psychology gives us a comprehensive knowledge of a conscious world, but that world which it gives us is a dead, inert, lifeless one. The problems with which normal psychology for the most part has chosen to deal are exceedingly interesting from the point of view of the higher culture, but they scarcely touch the vital questions which the disturbed, distressed human organism presents to the physician.

It is a serious question, therefore, whether the medical student, already almost submerged in the number of subjects which he is called on to master, should devote a serious portion of his time to the study of normal psychology as now studied and taught. There is one point of view, however, from which all psychologic studies must be of value, namely, in attracting the interest of the student to this type of culture, in directing his processes of thought along psychologic lines, in building up a psychologic setting or context and giving a trend to his culture by which the psychologic problems with which he will have to deal in diseased conditions will find an easier access to his imagination and awaken his interest. The student whose mind is well trained along lines of psychologic thinking will unquestionably have developed an attitude of mind which will give a meaning and interest to the problems in abnormal psychology that otherwise, without this previous training, he will only laboriously attain.

Normal psychology should be to pathologic psychology and psychotherapeutics what physiology is to pathologic physiology and physiologic therapeutics; but to attain this position processes and mechanism should be studied and elucidated rather than structures.

The problem of psychology has been defined by one of our first authorities as "the questions of what, how, and why" as regards its subject-matter. The answers to the questions "what" and "how" admittedly give us only a description of the facts, the "what" being the task of analysis, the "how" the task of synthesis. It is the answer to the question "why" that gives us an explanation of the facts, and this is the ultimate goal which science strives to reach. As Titchener properly says:[1] "If we attempted to work out a merely descriptive psychology, we should find that there was no hope in it of a true science of mind. . . . In order to make psychology scientific we must not only describe, we must also explain mind, we must answer the question why." And this is the real demand of applied science such as therapeutics is. Applied science has no use for a science that does not answer the question "why," does not give the explanation of the facts.

But we are told that any explanation of psychologic facts must be in terms of body processes — nervous processes; that "if we refuse to explain mind by body we must accept the one or the other of two equally unsatisfactory alternatives; we must either rest content with a simple description of mental experience, or must invent an unconscious mind to give coherence and continuity to the conscious. . . . But, if we take the first, we never arrive at a science of psychology; and if we take the second, we voluntarily leave the sphere of fact for the sphere of fiction." Consequently we must explain "mental processes in terms of their parallel processes in the nervous system."

Here I must part company with our distinguished psychologist, Professor Titchener, although I am not quite clear as to his real meaning. If he means that we should explain mind by specific parallel nervous processes, we certainly are entering the "sphere of fiction" indeed of romance, for we cannot correlate the simplest conscious process with any specific physiologic process, nor have we even a glimpse of the data which will allow us to approach the problem.

If on the other hand, he means a physiologic process as an abstraction or concept we are still entering, but justifiably, the sphere of fiction, though I would rather phrase it, of imagination, as much so as when we "invent an unconscious mind." Unconscious mental processes belong no more to the sphere of fiction than do unconscious physiologic processes. Both are simply concepts which we postulate to explain the facts. We simply say the phenomena occur as if the concepts were true, just as the physicists say, or used to say, that electrical phenomena occur as if a current of electrical fluid or particles flowed through a wire. So far as such concepts satisfactorily explain the phenomena and allow us to predict events we may treat them as true and as the cause of phenomena. To my way of thinking it does not make the slightest difference, so far as the purposes of explanation are concerned, whether we treat unconscious processes as physiologic or mental—both are concepts and in this sense only belong to the "sphere of fiction." And for the purposes of applied science—in the present case therapeutics — which rests on explanation, it is also necessarily a matter of equal indifference.

The important thing is that mental and physiologic events shall be related to antecedent events; in other words, that the mechanisms by which mental processes are determined shall be elucidated. This is a true functional psychology.

1. Titchener: Text-Book of Psychology

Normal psychology has strangely neglected this field and it has been left to students of medical problems—men not trained in psychologic methods—to attempt to work out these dynamic problems. If normal psychology is to become an applied science and in particular to become of help to medicine, to psychopathology and psychotherapeutics, it must occupy itself more than it has done with the problems of dynamics, of mechanisms, of function. One of the most serious criticisms of normal psychology is that thus far it has not been developed along lines that lead to findings that can be applied to practical life. All the physical sciences, chemistry, physics, geology, astronomy, biology, physiology, have contributed knowledge that can be made use of for practical purposes and thus each has furnished the data for an applied science. Psychology has lagged behind. One reason for this is that it has sought too little the explanation of phenomena — the "why" — and has confined itself too much to description — the "what" and the "how." To this extent it has failed to become "a true science of mind."

It is true that there has developed of recent years a movement to apply such psychologic "explanations" as we possess to pedagogic and social problems. But in these fields it must be admitted, in the first place, that only a limited number of the facts discovered can be applied in practice, and, second, that even if we were in complete possession of the "laws" which determined mental processes there will remain great difficulties in their practical application owing, as it seems to me, to the difficulty of controlling the conditions — human beings — to which we would apply them. In one field alone can we sufficiently control human beings, namely, in psychotherapy. But the processes which are involved in pathologic disturbances are the very ones which have been neglected in normal psychology. Unfortunately, as I have said, the professional psychologist has not occupied himself with searching out the mechanisms which are concerned in the abnormal manifestations with which the therapeutist has to deal. This has been left to the unprofessional psychologist — the physician. It is a pity; for it would be of great advantage to medicine if psychologists trained in psychologic methods would bring their experience and knowledge to the task of solving pathologic problems. They would find, too, in pathology a field of research that will furnish material which will disclose the mechanisms of mental processes in a way that does not obtain in normal conditions. As has been well said, "Disease dissects the mind far better than can the introspection of the psychologist."

Psychotherapy then, is an applied science and makes use of the complex mechanisms which underly and determine mental processes. Attempting first an understanding of the alterations of normal mechanisms which occur as pathologic processes (psychopathology), it endeavors to restore the normal balance by the force of normal processes. While psychotherapeutics is a so-called applied science, the application of the data supplied by science is an art. As the technic of an art differs in the hands of different craftsmen, so the technic of psychotherapy differs in the hands of different physicians. It would be out of place, therefore, in this discussion to enter on the question of therapeutic methods. Every method, however, must, consciously or unconsciously, make use of psychologic laws and processes.

What sort of psychology, then, should be taught to meet the requirements of medicine and particularly of therapeutics? The psychology that I would advocate may properly be termed the "New Psychology." Without speaking dogmatically, but only as I see the matter, I would say that it should include:

1. A study of the subconscious (whether regarded as psychical or physiologic) in all its relations. This embraces the content of the subconscious as the storehouse of conserved experiences; the influence and mechanism of the subconscious in determining conscious and physiologic processes; its incubations; its automatic manifestations — motor and sensory; its syntheses, dissociations, etc.
2. The phenomena of hypnosis and allied conditions.
3. Suggestion and its phenomena.
4. Memory as a process (as distinguished from its content and phases) and the part played by this process in conscious and subconscious activities.
5. Amnesia and its mechanism.
6. Fixed ideas, conscious and subconscious.
7. The dissociations and syntheses of "personality" and their mechanisms.
8. The emotions and feelings as forces which determine conscious and subconscious processes, dissociations, syntheses and activity, and which control the visceral functions of the body.
9. The emotional instincts as impulsive forces which determine mental activity and conduct.
10. The sentiments as complexes of ideas and emotions, and the part played by them in determining so-called personality and reactions to the environment.
11. Phenomena of repression, resistance, conflicts, inhibitions, etc.
12. The mechanisms of thought.
13. Complex formation.
14. The influence of complexes as conscious and subconscious settings or contexts in determining judgments, attitudes of mind, points of view, the meaning of perceptions, etc.
15. Associative processes and reactions, including word and galvanic reactions.
16. Habit processes.
17. Automatisms.
18. The mechanism of dreams.
19. The influence of the mind on the body.
20. Fatigue.

This is a rough and incomplete summary of the kind of psychologic knowledge which, in my opinion, the medical student needs in order to understand those disturbances of processes which appear as the symptoms of the psychoneuroses, and for the purposes of psychotherapy. Without such knowledge it is not possible to understand the protean manifestations of hysteria; the obsessions, the impulsions, the incompetencies of psychasthenia; the habit psychoneuroses; the autosuggestive phenomena due to attitudes of mind; the disturbances of the viscera dependent on emotional influences; the fatigue phenomena of so-called neurasthenia, and various other psychopathies amenable to psychotherapy. Nor is it possible to understand the symptomatology of the insanities. That our knowledge of the psychologic processes included in this program is now in only a formative shape is in no way an objection to making a beginning, and I, for my part, believe that the time is ripe for the colleges to include this field of psychology in their curricula.

I would point out that this program would supplement that suggested by Dr. Watson, not replace it; and further that the subjects included in it are all normal processes. They should be taught in a premedical course before the

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student enters the medical school, reserving instruction in the special disturbances of the normal processes, or psychopathology, for the medical curriculum.

But properly to train and equip himself in the New Psychology, the professional psychologist must leave his armchair introspections, and even his laboratory, and come to the hospital clinic. He must imitate the geologist and leave his academic shades and seek his material for study where it is to be found. It is in pathologic conditions of the mind that he will find his true field of research and the phenomena which will disclose the complex mechanisms of the mind. It is quite possible that his students also will have to follow him to the clinic where the instruction may have to be given. In any event I am sure that he will find a ready response from the physician, who will welcome him as an expert coworker.

458 Beacon Street.

THE EFFECTS ON THE HEART OF "SOLUBLE DIGITOXIN, CLOETTA"

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An article by Benjamin Moore, professor of biochemistry at the University of Liverpool, appearing recently,[1] on this subject, is based partly on experimental evidence, and it is the purpose of the present paper to discuss the evidence submitted.†

In calling attention to the need, so universally felt, for more exact preparations of digitalis, Moore says:

> Although digitalis is one of the most valuable of all our cardiac drugs, its therapeutic administration still lies at the stage of development, comparable to that of the use of decoctions of cinchona bark before the isolation of quinin.
>
> The physician is still, unfortunately, forced to prescribe an infusion or tincture of digitalis leaves prepared on the same principle as a cup of tea, although the toxicity of the product so administered may vary as much as that of the domestic beverage.

It is well known that digitalis leaves do deteriorate and become moldy when they are kept in a damp place, but, fortunately, we are now able to obtain standardized digitalis leaves of good quality, and the idea that digitalis leaves deteriorate rapidly even when kept under proper conditions is wholly erroneous.

It is true that no absolutely stable liquid preparation of digitalis or any of its principles is known though one is constantly being informed that this much-to-be-desired result has been accomplished, the announcement being made usually in connection with some high-priced proprietary preparation of digitalis which enjoys a more or less ephemeral existence until the claim of stability is disproved.

It is also true that tincture of digitalis of fairly uniform strength can be procured now from any first-class pharmacist, and I have on hand a tincture of digitalis which has shown very little change in activity during a period of nearly two years.

That the use of digitalis is not so unsatisfactory as Moore supposes is shown by the fact that it has not been displaced by crystallized strophanthin, which is a perfectly stable crystalline body of constant composition. Crystalline ouabain was described about twenty-five years ago,[2] and more recently it has been prepared by Thoms, who introduced it under the name of g-strophanthin or gratus-strophanthin crystalline. Although this is regarded as a substitute for digitalis, having a constant composition and exact dosage, it has not attained any considerable degree of popularity.

Moore calls attention to the progress that has been made in digitalis therapy through the practice of standardizing the digitalis bodies, but he objects most plausibly to the methods of standardization mentioned by him, because they depend on the killing-power of the drug, whereas physicians do not want to kill their patients but to cure them.

While it is perfectly true that physicians do not wish to kill their patients, it is equally true that the action of digitalis which they utilize in curing them is that which kills if it be carried too far, and it seems to me that it would be quite as logical to object to testing the strength of strands of a cable by raising the tension to the breaking-point, on the ground that engineers wish the cable not to break, as it is to object to the method in vogue for testing the activity of the digitalis bodies on the grounds mentioned.

The argument urged by Moore against the accepted methods of standardizing the digitalis bodies is all too familiar to those who have heard all pharmacologic methods held up to derision, and the fact remains that Moore brings forward no evidence to show that there is any better method of standardizing the digitalis bodies than that which depends on their power to kill.

This method is recognized throughout the world by pharmacologists as the best one available, and since a great many investigators have sought earnestly, without success, for a better method, it will be necessary to furnish pretty strong evidence of the superiority of any other before it can hope for favorable consideration at the hands of either the pharmacologist or the clinician.

The orderly discussion of this article will necessitate reference to this subject again.

There is one statement made by Moore with which most of us will be inclined to agree, at least in part. He says:

> It requires some training of the ear to count the rate of heart-beat accurately in the rabbit, on account of the speed of the beat, but the heart-beat, although so rapid, is steady and regular, and with a little practice can be counted quite well.

The protocols show that the rate of the heart-beat, in some cases, was about 324 per minute, and he states that it was *almost* (italics mine) too fast to count. It is much better to use mechanical means for recording the rate of the heart-beat when it is so rapid, as most observers will agree, for comparatively few among even trained observers can count the heart-beat accurately when the rate exceeds 175 per minute.

The following statement of Moore's requires consideration:

> In the course of the present work, in order to avoid complicating the results by administration of alcohol at the same time and to render intravenous injection possible, I have evaporated off the alcohol from a tincture of digitalis, and then made the residue up as a fine suspension in saline. Such a suspension I have found entirely inert on intravenous injection, and it has occurred to me that the uncertain action of tincture of digitalis when given by the mouth may be due to its precipitation in insoluble form when largely diluted with water in the stomach.

1. Moore, B.: Brit. Med. Jour., Jan. 13, 1912, p. 60.

† The soluble digitoxin referred to is the proprietary preparation known as Digalen, and Moore's article strongly supports the claims by the manufacturers that it is a more reliable and less harmful preparation than digitalis.—EDITOR.

2. Arnaud: Compt. rend. hebd. Acad. d. Sc., July, 1888.

This statement as it stands is wholly inexplicable, for there is no fact which is more thoroughly established than that the alcohol may be evaporated from a tincture of digitalis without altering the action appreciably so far as the digitalis is concerned.

The extract of digitalis of the United States Pharmacopeia is essentially such a preparation, being an evaporated fluidextract, which in turn is in part an evaporated tincture. If the evaporation of the alcohol sufficed to render the preparation inert, as would seem to be implied by the statement of Moore cited above, then the extract of digitalis would perforce be inert, which it is not, of course.

The protocol of Experiment XII seems to throw some light on the results cited by Moore. Reference to the protocol shows that he evaporated the tincture to *dryness*.

Every pharmacist knows, of course, that digitalis is injured by prolonged heating, or by heating to a very high temperature, and every pharmacist also knows that to evaporate tincture of digitalis to absolute dryness requires either prolonged heating or heating to a high temperature; hence one can only suppose that Moore either heated the digitalis too long or to too high a temperature, and it cannot be stated with too great emphasis that the alcohol may be evaporated from tincture of digitalis without destroying its action. That Moore destroyed the action of the tincture in the way mentioned has absolutely no importance, since a pharmacist would no more do that than he would incinerate it.

I placed 15 c.c. of tincture of digitalis in a flat-bottomed dish and heated it on a boiling water-bath until the tincture was reduced to a pilular consistence, after which the heating was continued at the same temperature for half an hour longer. The result was surprising, in view of Moore's statement just quoted, for when the resulting extract was diluted with saline to its original volume (15 c.c.) it was found to be nearly twice as active as digalen which was taken from an original, and previously unopened, bottle. The extract so overheated was soluble in water with only slight cloudiness.

This discussion may appear to be wholly superfluous, since such a procedure is never necessary, but the statement referred to might cause misunderstanding were it passed over in silence.

While Moore was so scrupulously careful to get rid of the alcohol in order that it might not interfere with the action of digitalis, that he actually destroyed the digitalis itself in the effort, he appears to be wholly oblivious of the fact that digalen also contains alcohol, and, since digalen is only about a fourth as active as tincture of digitalis, a dose of digalen actually contains nearly as much alcohol as a dose of tincture of digitalis.

Moore states that the residue left after evaporating the tincture of digitalis was made into an emulsion, which might give the impression that tincture of digitalis is immiscible with water.

It is very well known that digitalis contains a small amount of wholly inert fixed oil, a part of which is extracted in making the tincture, and that this causes a slight milkiness when the tincture is added to water.

If a perfectly clear solution is desired it may be had by using the defatted tincture of digitalis which mixes with water to form a perfectly clear solution. It is quite possible that this may precipitate after standing for some time.

The defatted tincture of digitalis has been recommended for general use at various times, but the advantages which it may appear to have over the official tincture have not sufficed to make it popular.

As to Moore's suggestion that the uncertain action of digitalis may be due to the precipitation in an insoluble form in the stomach, it may be recalled that the famous experiment of Koppe, in which 3 mg. of the insoluble crystalline digitoxin taken by the mouth gave rise to toxic symptoms, proves that digitoxin may be absorbed from the alimentary canal despite its insolubility in water, and, on the other hand, the most soluble members of the digitalis group, such as strophanthin, show the greatest variation in absorption from the gastro-intestinal canal.

While Moore does not say that digitonin is actively hemolytic, he would seem to imply that it is so, as indeed it is, and he does call attention to its being an injurious constituent of the infusion of digitalis. He discusses the actions of two digitalis bodies which were studied in his laboratory and says:

> Both of these bodies have a remarkably stimulating action on the cardiac muscle, and when perfused through the isolated heart show an increased force of beat and a slowing of the rate, and generally give tracings very similar to digitalis. But, unfortunately, they have in the end an injurious effect on the heart, appearing to render it edematous; and also they possess a highly injurious action on red blood-corpuscles, causing rapid hemolysis even in dilute solution. In many respects these sapoglucosids possess an interesting and suggestive resemblance to the bile salts, but their hemolytic and certain other properties rule them out as heart tonics. In crude digitalis such an injurious sapoglucosid—namely, digitonin—is always present, and in the infusion its presence is even necessary to dissolve the *crystalline digitoxin*, which is quite insoluble in aqueous solution.

Lest the foregoing give rise to misunderstanding of the actions of infusion of digitalis when used therapeutically, attention is called to the fact that while saponins, or the sapoglucosids, such as digitonin, are actively hemolytic when they are added to suspensions of red blood-corpuscles in normal salt solution, this hemolytic action does not occur when infusion of digitalis is taken by the mouth.

First, the amount of digitonin present in digitalis leaves is small, according to Sollmann.[3] Second, it is quite well known that the saponins of this type are not absorbed readily from the alimentary canal.

Third, when digitonin, or other similar saponin, is added to normal blood, or to red blood-corpuscles suspended in serum, hemolysis does not occur unless the proportion of digitonin, or saponin, is present in amounts several hundreds of times greater than could possibly be present in the blood after the administration of the therapeutic dose of infusion of digitalis.

The reason for this difference in the hemolytic action of these bodies in saline and in blood or serum suspension of the red blood-corpuscles is that the cholesterin of the serum combines with the saponin, or digitonin, far more readily than the red blood-corpuscles do, and they are spared the hemolytic action which the saponins exert in saline when the corpuscles are not thus protected.

Ehrlich has likened this protection which the cholesterin affords to the red blood-corpuscles against the hemolytic action of these saponins to the protection afforded by a lightning rod to the building over which it is placed.

I have injected some twenty to forty times the fatal dose of digitalis directly into the veins of an animal

3. Sollmann: Text-Book of Pharmacology, Ed. 2, p. 479.

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without causing hemolysis. Richard Weil, who has done much work with these hemolytic agents, has informed me (orally) that 5 c.c. of blood contain more than enough cholesterin to protect the red blood-corpuscles against the hemolytic action of the digitonin which is found in a therapeutic dose of digitalis, and that under no therapeutic conditions could enough digitonin enter the circulation to cause the least particle of hemolysis.

I wish it to be understood distinctly that I do not advocate the injection of digitalis preparations directly into the veins in therapeutics.

Moore calls attention to a number of active glucosids in digitalis and says that the tincture or the infusion represents a "blunderbuss" of about half a dozen bodies with powerful cardiac action.

Further along in his paper he says, with reference to these bodies:

It is obvious that among these many glucosids possessing a marked cardiac action, if one could be found free from the saponin properties of hemolyzing blood and sufficiently soluble in water to be administered without alcohol, and in case of need given intravenously, it would possess a preference as cardiac tonic. Such a substance would appear from Waller's work to be a rarity, but Cloetta claims to have isolated a body with these properties from digitalis leaves in his "Digitoxinum solubile."

There are several statements here quoted which require some explanation.

While Cloetta does claim to have isolated a principle such as Moore mentions, it is also true that Kiliani[4] severely questions the accuracy of Cloetta's claims.

Kiliani calls attention to several misstatements in Cloetta's papers dealing with the chemistry and identity of the so-called soluble digitoxin. Kiliani says, in part: "Cloetta's contention, that the molecular mass of digitoxin is reduced one-half by transposition into the amorphous state, is nonsense."[5]

Kiliani adds further: "Digalen is nothing but a high-per cent. digitalein."[6] He refers in this to the so-called soluble digitoxin, before its solution in glycerin, alcohol and water, in which form it is known as digalen.

Schmiedeberg, who isolated digitalein about thirty-five years ago,[7] examined digitalein chemically and pharmacologically, and states that it combines in itself to a peculiar degree the properties of digitonin, on the one hand, and of digitalin, on the other.

It is conceded by every one who has studied the subject that Schmiedeberg and Kiliani have contributed more to the chemistry and pharmacology of digitalis than any other two men who have ever lived.

If Moore is correct in stating that the sapoglucosids, such as digitonin, have such an injurious action on the heart after a seeming digitalis action, it would seem to place a very heavy responsibility on those who use digalen, in view of the statement of Schmiedeberg.

From what has been said it would appear that if Kiliani and Schmiedeberg are correct in regard to their statements concerning digalen and the duality of actions of digitalein, digitalis can hardly lay claim to a monopoly of scattering its shots in cardiac disease, but it would at least have the advantage of a preponderance of those constituents which do not injure the heart after a seemingly beneficial action.

4. Kiliani: München. med. Wchnschr., 1907, i, 886.
5. "Die Behauptung Cloettas, dass die Molekulargrösse des Digitoxins durch dessen Ueberführung in den amorphen Zustand auf die Hälfte herabsinken könne, ist eine Ungeheuerlichkeit."
6. "Das Digalen wird nichts anderes als hochprozentiges Digitalein."
7. Schmiedeberg: Arch. exper. Path. u. Pharmakol., 1875, iii, 16.

After satisfying himself that commercial digalen was free from the objectionable property of causing hemolysis — presumably in the presence of serum — Moore says:

The first impression obtained in studying the action on the heart by orthodox methods was disappointing, for it looked as if the substance was very weak, as compared with a standardized tincture of digitalis. So it is, if the ordinary sign of stopping the heart within one hour be taken as the standard of therapeutic activity.

After comparing the activity of digalen and tincture of digitalis on frogs and rabbits, Moore continues:

From the point of view of lethal dose, therefore, digalen solution only possesses one-third to one-fourth of the strength of standardized tincture of digitalis. But the question arises: Does the lethal dose, as determined in this way, fix the therapeutic value of the drug? . . . and in our opinion, the effects on the heart obtained in the experiments on the intact mammal, and the minimal amounts required to develop a marked therapeutic action in the isolated mammalian heart, negative this proposition, and demonstrate, on the other hand, that the lessened lethal effect is a distinct advantage.

The method of standardizing the digitalis bodies has been discussed, and if we accept the weight of opinion of such men as Schmiedeberg, Focke, Gottlieb, Fraenkel, Sollmann, Edmunds and Hale, and scores of others, in regard to this question, then we must see that, according to the testimony of Moore himself, digalen is indeed possessed of a very weak digitalis action.

Moore states that one part of digalen in 500 parts of saline poisons the heart when it is perfused with this long enough, he then continues:

Contrasted with this, even so high a concentration as 1 in 70 does not poison when serum is the circulating medium instead of saline, but instead the system—*cardiac muscle, serum and drug*—comes into equilibrium at the stage of therapeutic effect, and remains there steadily for days until the drug becomes changed or excreted.

Unfortunately, Moore does not appear to have made the simple experiment of *perfusing* the heart with such concentration of digalen in serum, he merely makes the assertion as quoted, apparently basing it on the experiment of adding digalen to the serum of the *intact* animal in such concentration, apparently oblivious of the fact that when digalen is so added to the serum (or blood) of the intact animal, numerous organs take up a part of the digalen, whereas, when the drug is perfused, the heart must of course continue to be acted on so long as the drug remains in sufficient concentration in the perfused fluid.

Moore assumes — and this is pure assumption — that the digalen when injected into the intact mammal is distributed between the serum and heart alone until equilibrium is established at the therapeutic stage and remains there steadily for days. This statement is simply amazing, and, in the absence of the least evidence to support it, it can hardly be accepted as correct, and indeed Moore must have overlooked the statement just cited, for he proceeds to give the protocol of Experiment II, in which about two and a half times the lethal dose of digalen (as determined by himself) was injected intravenously into an animal within a period of a few minutes less than twenty-four hours. If the drug continues to circulate for days in equilibrium at the therapeutic stage, it is difficult to understand why about two and a half times the fatal dose can be injected intravenously within one day without causing any effect other than therapeutic slowing of the heart-rate.

A detailed study of the protocols of all of Moore's experiments would require more space than we can

devote to them here, but the following discussion will serve the desired purpose.

In Experiment I, digalen was injected intravenously at 11:52 a. m., 2:56 p. m. and 4:03 p. m., in equal amounts, the total amount injected being 4.3 c.c. per kilogram of body-weight, or 91 per cent. of the fatal single dose as determined in Experiment V. There was no slowing at 4:36 p. m., or thirty-three minutes after the last injection. If three doses of digalen, amounting to 91 per cent. of the single fatal dose, administered within a period of four hours and eleven minutes, in the way most favorable for securing prompt action — i. e., intravenously — do not produce slowing of the heart before the following day, we can hardly consider that digalen is the emergency remedy which it has so often been represented as being.

In Experiment II, the amount of digalen injected intravenously within a period of twenty-four hours was 11.4 c.c. per kilogram, or, as previously stated, about two and a half times the single fatal intravenous dose. The heart was slower by sixty beats per minute on the twelfth day.

That would suggest that digalen exhibited the so-called cumulative action of the digitalis bodies, if it suggested anything more than that the heart-rate of the rabbit showed considerable variations under normal conditions.[8]

That digalen does indeed show this so-called cumulative action has been proved by the experiments of Fraenkel,[9] who sought to refute the claim made by Cloetta that digalen exerted a prolonged therapeutic action without showing cumulation.

In Experiment IV, a rabbit received, by vein, 3.5 c.c. of digalen per kilogram of weight and showed an increase in the heart-rate of thirty-six beats per minute after an interval of nineteen hours and forty-five minutes. This is mentioned by Moore as a toxic effect, but the dose administered in this experiment is actually smaller than that given in Experiment I, in which the rabbit received 4.3 c.c. per kilogram of weight, and in which the results are cited as showing the therapeutic effects on the second day.

If we can accept these observations as correct, it must be difficult, indeed, to fix on a dose which will surely give therapeutic effects without danger of subsequent poisoning. The results in these two experiments are difficult to harmonize with the oft-repeated claim that digalen acts with great promptness after its intravenous injection, unless we suppose that the changes in rate were such as normally occur and are not to be attributed to the action of the digalen, but in Experiment V, a rabbit received a dose of 4.7 c.c. of digalen per kilogram of weight, or only some 10 per cent. more than in Experiment I (which showed no effects till the following day), and the heart-rate was slowed by forty-eight beats per minute within three minutes, showing the extreme rapidity with which digalen may act when toxic doses are given. Of course, it will be remembered that in Experiment I the total dose was given in three portions, but all within a period of four hours and eleven minutes.

If such a large amount injected at such brief intervals as in Experiment I gives no effect on the day of injection, while a slightly greater amount injected at once produces such a great effect in three minutes, followed by death in forty-three minutes from the time of injection, it must appear to the ordinary observer that it would be extremely difficult to foretell which doses would be followed by death, and which by the therapeutic action only.

Experiment VI is entitled "High Toxicity of Tincture of Digitalis (Standardized)." In this experiment a rabbit received 1.07 c.c. tincture of digitalis per kilogram of weight and died instantly. The injection was at 12:10, the animal was dead at 12:10. Experiment VII is entitled "Toxicity of Small Dose of Tincture of Digitalis (Standardized)." The dose in this experiment was actually greater per kilogram of body-weight than that in the preceding experiment in which the animal died instantly, yet this is termed a small dose.

Experiment VIII is entitled "Determination of Lethal Dose of a Standard Tincture of Digitalis."

Doses of 1.07 c.c. per kilogram, and 1.12 c.c. per kilogram of weight having proved fatal instantly, in one case, and in four hours in the other, Moore proceeds with the "Determination of Lethal Dose of a Standard Tincture of Digitalis" by doubling, and more than doubling, the instantly fatal dose, so he gives this animal 2.3 c.c. per kilogram by vein and records that it died almost instantly.

Since it is customary to reduce the amount which is instantly fatal when determining the fatal dose in subsequent experiments, it suggests that Professor Moore may have suspected what the reader has already guessed, i. e., that the instantaneous death of the rabbit in Experiment VI may not have been due entirely to any extraordinary toxicity of the tincture of digitalis, such as the protocol of the experiment would seem to imply, but that there may have been contributory circumstances, such as every laboratory worker encounters at times, for if there had been no such accident, there would have been no reason to more than double the instantly fatal dose, when "determining the lethal dose"; at any rate, in Experiment XI a rabbit received a dose of 3.75 c.c. per kilogram of weight, in the course of a day, and in addition the animal received 1.25 c.c. per kilogram on the third day, but the rate was practically the same at the end of the third and fourth days as before the experiment.

As a matter of fact, it need hardly be stated that these experiments give little information concerning the minimal lethal dose of either digalen or tincture of digitalis.

Moore discusses the perfusion of the isolated mammalian heart with digalen in saline, and says:

> The hearts used in these experiments were taken from medium-sized rabbits, so that the results can be strictly compared with those obtained in the previous section on intravenous injection.

It is somewhat surprising to read that the results of perfusion experiments can be compared strictly with the results of intravenous injection, if one is correct in accepting the context to mean that the comparison refers to *quantitative* actions.

The several tracings obtained from perfusion experiments with digalen do, indeed, show a marked action, but every one knows that digitalis-effects are obtained when digitalis bodies are perfused through the heart.

Since Moore maintains that the effects are strictly comparable to those obtained in the experiments with intravenous injection, it is interesting to note that full therapeutic effects were obtained within from three to nine minutes in all cases of perfusion; therefore, if we are to consider the results as really comparable to those obtained after the intravenous injection, we must suppose that the enormous doses of digalen used in the

8. That the heart-rate varies widely in normal rabbits is shown by the initial rates of the different rabbits used by Moore. Two showed initial rates of 222 and 228 per minute, respectively, while one showed an initial rate of 300 per minute. The latter weighed 1,630 gm.; the one having the slower rate weighed 1,850 gm.

9. Fraenkel: Arch. exper. Path. u. Pharmakol., lvii, 123.

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intravenous injection experiments were devoid of therapeutic action, at any rate, as previously cited, no slowing was stated to have occurred on the same day after an amount of digalen equal to 91 per cent. of the fatal dose as determined in Experiment V.

When discussing the coefficient of distribution between the heart and the circulating fluid, deducing that digalen is safer than strophanthin, he says:

> Accordingly, in treating heart conditions of failing compensation, it is distinctly the weaker drug that is indicated and not the stronger one, and also the more readily soluble and diffusible one, so that accumulation may be avoided.

When this statement is made in connection with the announcement that digalen is not capable of poisoning the heart even in the concentration of one part of digalen to seventy parts of serum, it seems very favorable to digalen. It is true, indeed, as stated, that digalen is not very toxic, which is merely another way of saying that digalen has a very weak digitalis action, whether it be considered with reference to its therapeutic, or toxic, action. If mere weakness is desirable, however, that can be attained with tincture of digitalis by diluting it with from three to four times as much normal salt solution, or, better, the defatted tincture can be so diluted when a perfectly clear preparation is desired, though it is perfectly true that this may possibly have drawbacks so far as intravenous injection is concerned, and when that method of administration is desired the solution of strophanthin can be diluted to any desired degree.

While digalen is a weak preparation of digitalis, as stated, this is by no means true of the so-called amorphous digitoxin, and Moore himself states that this is capable of causing the heart to stop beating with a concentration of 3 parts in 5,000,000 of saline, though he denies such action when serum is used. This statement has been discussed already and attention is called to it again on account of an apparent discrepancy in the arguments advanced, and to show, by Moore's own experiments, that the active constituent of digalen is not the weak substance that one might suppose, however weak commercial digalen in liquid form is.

The statement just mentioned is based on Perfusion Experiment II, in which 1 c.c. of digalen was added to a liter of saline for perfusion. It would be a somewhat plethoric rabbit of medium size, into which so much digalen could be injected at once and not exceed the concentration of 3 parts in 5,000,000 of serum, since that would require a content of 1 liter of serum, or some ten to twenty times as much as would be found in the rabbits of the size used by Moore.

It is quite true that the toxicity of the digitalis bodies depends to a very large extent on the concentration in which they reach the heart, but that does not alter the fact that total quantity has something to do with the intoxication also, and when the limits of dilution are approached, it must be obvious that the abstraction of a very small amount would reduce the total below the point where there would be any action if the amount of perfusion fluid or serum were very small, and that the larger the volume bathing the heart the more that there would be to abstract before the concentration would fall below the point at which action would continue. But, as already pointed out, the true explanation of the difference in the action when 1 c.c. of digalen is perfused through the heart, and when the same amount is injected intravenously, is that in the first case the heart alone shares with the perfused fluid the distribution of the poison, whereas when this is injected intravenously other organs take up a part of it from the blood.

It is quite possible that the serum may give up digalen less readily than does saline, but no evidence is afforded by Moore that digalen acts differently from the other digitalis bodies in this respect.

It is the mission of the critic to examine in detail any work which bears on the questions which concern him, and it is because it seemed to me that Moore's results and conclusions would tend to give the general practitioner too high an opinion of digalen, with a correspondingly poor opinion of digitalis and its preparations that the present task was undertaken.

It is not impossible that digalen may have a place in therapeutics, but, obviously, a very limited field of usefulness, in the present state of our knowledge; it is equally obvious, however, that nothing but disappointment can result from its use under a total misapprehension of its relative and actual value in the treatment of cardiac disease.

It will be evident to the most obtuse that the conclusions at which Moore arrived are quite different from my conclusions.

It is safe to say that Moore's conclusions are pleasing to the manufacturers of digalen, and when manufacturers of proprietary preparations find literature suited to their purposes of advertising they proceed, very naturally, to make such use of it as they deem best, and it would not be at all surprising if Moore's article were circulated either in the form of reprints, or by means of liberal abstracting in medical journals.

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TRACHOMA, ITS ETIOLOGY AND TREATMENT

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Trachoma is a disease of the conjunctiva, in which there is a characteristic connective-tissue hyperplasia. It is marked by a proliferation of lymphoid cells. The follicles formed by this proliferation tend to degenerate and to become encapsulated by the newly formed connective tissue. As a result of this inflammatory process, newly formed blood-vessels penetrate these follicles. They become distended with fluid, push their way above the surface of the conjunctiva, finally becoming degenerate, break down, and the overlying conjunctiva is replaced by scar tissue, and thus, step by step, the entire conjunctiva becomes destroyed. As a result of this chronic inflammatory process, connective-tissue changes take place in the deeper structures of the lid, normal blood-vessels become obliterated, all glandular secretion is checked and there is produced a general atrophy of the lid.

It was a little more than a hundred years ago that the significance of this disease began to be appreciated. When Napoleon invaded Egypt, in 1798, his soldiers were attacked with a violent form of ophthalmia. When they returned to Europe, those so suffering were discharged from the army. Similar outbreaks occurred wherever these discharged soldiers went, and thus the disease became disseminated throughout the country. This was thought at that time to have been the first

introduction of trachoma into Europe, but subsequent investigations proved that it had existed there for centuries previously.

As to the contagiousness of trachoma, there can be no doubt. For the past hundred years it has been a menace to the problems of military hygiene in the European armies. Wherever large bodies of men are congregated, where intimate contact and foul air are unavoidable, rapid dissemination is certain.

In this country, those who live in the tenement districts of the large cities are living in constant danger of infection. Let one child in a large family of children become infected, and the contagion will attack them all.

Safford, in his excellent paper on trachoma, states that on the long voyages from Italy to South America on emigrant ships, the Italian government has found it necessary to segregate in a special part of the ship those passengers who are found, after a prescribed special medical examination by government officials, to be afflicted with trachoma, even though the countries to which they are going do not as yet exclude trachomatous immigrants.

"On the steamship *Oldenburg*, arriving at Baltimore in February, 1907, sixty-seven persons from the same compartment were found to be suffering from an inflammatory affection of the eyes, of the same general type, the origin of which was apparently due to the presence in their midst of four cases of trachoma in a state of acute exacerbation. Of these sixty-seven afflicted passengers, forty-eight developed trachoma, subsequently, while the remainder promptly recovered, under simple remedial measures."

The violence of the onset seems in some way related to the environment of the individual, conditions as stated above, being directly conducive to the more aggravated types. Improved methods of sanitation, and laws regulating immigrant traffic, have done much to minimize the frequency of these epidemics, and so to-day, except in the hot-beds of trachoma, acute onset is unusual.

Despite our intimate knowledge of the pathology of this disease, its etiology is still unknown. A summary of the work done during the past four years in this direction centers about the so-called trachoma corpuscles, or trachoma bodies. Halberstaedter and von Prowaczek, in Java, were the first to describe these bodies. Almost simultaneously Professor Greeff and his coworkers succeeded in finding and describing similar bodies. Fleming, from a review of the literature on the subject, is enabled to classify four different types, of which he considers only two as positive. These corpuscles have been found not alone in trachomatous eyes, but in eyes entirely free from any evidence whatsoever of trachoma. Stargart claims to have found them in a case of blennorrhea neonatorum. Fleming found them associated with gonococci, repeatedly, in connection with ophthalmia neonatorum. In one case, for the first few days only trachoma bodies were found; after the fifth day, both trachoma bodies and gonococci were present for several days, followed by a disappearance of the trachoma bodies. The gonococci continued to be shown for about ten weeks, when finally they disappeared and the trachoma bodies reappeared. They have been found at times in the gonorrheal urethra of both males and females.

The obscurity of their origin and the varied character of their morphology have led some of the investigators to consider the question as to whether we are dealing with a microorganism, a parasite, or a degenerate cell. Some adhere to the latter theory, and not without some foundation, for not only have these bodies not been isolated, but efforts to obtain them in pure culture have been unsuccessful. The consensus of opinion, however, is that they have some pathologic significance in relation to trachoma. They are found in the conjunctival epithelial cells. They present the appearance of minute diplococci situated in the protoplasm of the cell. They multiply until they occupy the entire body of the cell, pushing the nucleus to one side. As they increase in number, a reactionary product or zone forms about them, which finally gives way, liberating these corpuscles with a destruction of the cell-body. Trachoma has been communicated to apes and orang-outangs by inoculation, but as yet Koch's law has not been fulfilled.

The first point that I should like to emphasize is that trachoma is essentially a chronic disease, and that, with each succeeding month of its duration, new features arise to annoy and harass the unfortunate patient. Those who are not actively engaged in the treatment of trachoma, but refer their cases to the clinics which fall heir to most of them, cannot conceive of the terrible handicap which trachoma imposes on its victim. Years, as a rule, elapse between the time of its incipiency and the terminal stage of cicatrization, and, unless the patient is so fortunate as to have the disease arrested early by intelligent treatment, partial impairment of vision or total blindness is the result, and thus these poor unfortunate individuals become a burden to themselves and society.

While it is true that we do see cases of trachoma that run a very rapid and malignant course in the beginning, these are the exceptions that prove the rule, and it is thought by some that this violence of onset is due to a superadded infection. The typical patient presents himself at the office, or more often the clinic, stating that he was sent by the school physician or nurse to have his eyes examined. The patient has noted a stinging, burning sensation in the eyes at times, and an occasional slight redness of the eye-lid, with slight secretion, but the inconvenience was not enough to prompt him to seek relief. Some of these patients have been afflicted for months before they are seen for the first time; indeed, interference with vision and associated photophobia and lacrimation are sometimes seen on a patient's first visit.

The clinical picture of this chronic type is as follows: On inspection we note a slight drooping of the upper lids; the lids also appear thicker than normal, and the palpebral conjunctiva of both lids is studded with numerous translucent lymphoid follicles, varying from the size of a pin-head to that of a small grape-shot. In the early stage, these follicles are confined to the retrotarsal fold of the upper lid, and this must be doubly everted, while the patient is told to look downward, before they can be seen.

At this point it might be well to emphasize the great similarity between trachoma and follicular conjunctivitis. They are both prone to multiply under similar circumstances of bad air and overcrowding in public buildings. The follicles, both microscopically and macroscopically, are identical. In the early stage of trachoma there is very slight, if any, thickening of the conjunctiva. The arrangement of the follicles in rows are said to be characteristic of follicular conjunctivitis. In follicular conjunctivitis there is never any permanent thickening of the conjunctiva.

It is greatly to be deplored that there is no diagnostic point that will enable the general practitioner to separate these two diseases—to say nothing of the difficulty which the specialist encounters. We must wait until the second, or hypertrophic stage, before we can be sure of our diag-

nosis. Conjunctivitis that does not result in a hyperplastic granular destruction of a part of the palpebral conjunctiva cannot with certainty be called trachoma. The distinguishing difference between trachoma and follicular conjunctivitis is that the latter tends to spontaneous recovery, leaving a normal conjunctiva. Trachoma never does. I am convinced that a great many of our patients who get well under expression have cases of follicular conjunctivitis. All doubt as to the diagnosis is laid aside when the disease reaches its second stage, or that in which there is a hypertrophic thickening of the conjunctiva, associated with a beginning destruction of the lymphoid follicles and a deposition of fibrous tissue. But often months are passed in reaching this stage, when the patient's real suffering begins with associated impairment of vision. The palpebral conjunctiva becomes rough from the ulceration and destruction of the follicles and the tarsal cartilage becomes thick and irregular. The effect of this rough and inflamed surface coming in constant contact with the delicate corneal epithelium is erosion of the latter. Infiltration between Bowman's membrane and epithelium occurs, blood-vessels also penetrate between these two layers and thus we have a condition known as pannus. This always begins in the upper half of the cornea and is asserted by some to be a direct transmission of the disease process to the cornea. Others contend that it is nothing more than an inflammation due to the constant friction from the upper lid. No doubt this latter condition has a great deal to do with bringing this inflammation about. It seems a reasonable conclusion, therefore, that both factors are conducive to this condition. That they are not always present in every case of pannus is also evident, for we sometimes have pannus formed early, before there is any roughness of the lid, and, vice versa, there are cases in which pannus does not form, despite an extreme roughness of the lid. Safford notes that pannus is not apt to form in those eyes in which the lids lie in loose contact with the cornea.

In the third and last stage of trachoma the disease has become or is becoming arrested. The palpebral conjunctiva reaches the atrophic stage, and, in its place, has formed connective tissue. The tarsal cartilage also shares in this atrophy. As a result the lid is no longer held in its natural position, the lashes become sources of constant irritation from their inturning to the already inflamed cornea, and thus the pannus that was produced by the roughened conjunctiva is prevented from clearing up. Exudation finally finds its way beneath the basement membrane and becomes organized, and thus the vision of the individual is permanently impaired.

The acute type of trachoma differs from that already described in its first stage only, and it will only be necessary to refer to it briefly. The onset is sudden. The patient has symptoms of violent ophthalmia with photophobia, lacrimation and a free discharge of thin seropus. On examination, the conjunctiva appears swollen and the follicles may not have appeared; they are masked by the overlying conjunctival infiltration. Ptosis may be marked. They do not respond to treatment, and in a few weeks the acute swelling begins to subside; connective tissue forms, and the follicles stand out prominently. Pannus is apt to appear early. The hypertrophic stage supersedes the inflammatory stage in a few weeks, and the case begins to take on the chronic nature characteristic of the disease.

As to the medical treatment of trachoma, there has been no advance during the past ten years. It must be said, however, that the remedies which are used to combat this disease are not without effect. The great stumbling-block in the way of a successful cure is the patient himself. The pain, loss of time, and expense of carrying out the treatment cause the patients to fail to follow the physician's advice. For the first few weeks or months they require either the daily or alternate day visit to the office or clinic. The two main remedies depended on to combat the inflammation and to lessen hypertrophy are silver nitrate and copper sulphate; the former in cases in which there is much secretion, or in the presence of corneal ulcers, the latter, in cases in which there is marked hypertrophy. Both are extremely painful and persistently so. After a few weeks' treatment, symptoms are relieved and the patient does not return for treatment. Presently a relapse occurs, ulceration and destruction of conjunctiva sets in, and the patient's vision becomes impaired from corneal involvement, and the disease has progressed beyond the stage in which a cure is possible.

Expression is indicated in those cases of trachoma presenting numerous follicles in the retrotarsal folds, as well as on the palpebral conjunctiva. This operation does not bring about a cure of trachoma, as some might think. It merely lessens congestion, empties the contents of the follicles before the conjunctiva overlying them has been destroyed, and also makes the application of remedial measures more effective. That a great many cases of true trachoma have been arrested or cured by the combined method of expression and treatment with copper, there is no doubt, but, as said before, we are sure that a great many instances reported of successful cures are not cases of trachoma. I am firmly convinced that no cases that respond to expression, in a few weeks after treatment, should be classified as trachoma, although at the time they present precisely the same picture. This differentiation is emphasized for the reason that the physician, noting the successful results following expression, with very little attention to the after-treatment, is almost certain to fail to emphasize to the patient the importance of the after-treatment, and it is for this reason that relapses occur so often. The disease is allowed to progress into the hypertrophic stage, with beginning cicatrization, when successful cure by any and all methods becomes impossible, and a resort to surgical measures is the only means of relief at hand. This is an acknowledgment in itself of our inability to combat the disease successfully.

The surgical treatment of trachoma, as outlined by Professor Hiesrath, of Königsberg, and later modified by his pupils, Vossius and Kuhnt, has not received the recognition that it so justly deserves. Their results for the past ten years have been so uniformly successful, and their theories were based on such common-sense principles, that it is difficult to understand why this operative procedure has not been adopted wherever trachoma is found. These men recognized, in advanced cases of trachoma, the utter failure to arrest the disease by medical or mechanical (expression) means. They observed, in cases of old trachoma, in which a cure had been brought about by Nature, a complete obliteration of the retrotarsal folds, a shrunken and distorted cartilage, with its subsequent evil effects, a pannus that was dense and permanent, a complete destruction of all follicles and a dry and shrunken conjunctiva. With this picture, then, before them, their argument must have been: Since this disease process will not subside until

the tissues involved are destroyed, why not remove them at once, and thus save the patient the time and suffering which Nature takes years to accomplish? Their reasoning was correct, as demonstrated by their results.

To Dr. H. W. Wootton credit is due for having brought this subject before the medical profession of this country. Although he was not the first to perform this operation here, he has done more than anyone else toward establishing it as a recognized surgical procedure.

The two operations indicated in advanced cases of trachoma are, first, a removal of the tarsal cartilage of the upper lid, together with its overlying conjunctiva

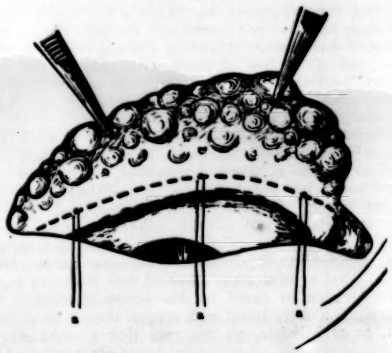

Fig. 1.—Doubly everted upper lid; a, sutures; line of dashes, line of upper incision.

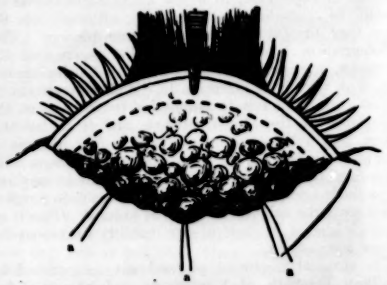

Fig. 2.—Upper lid everted; a, sutures; line of dashes, line of lower incision.

and retrotarsal fold; second, a removal of the tarsal cartilage of the upper lid, alone. The former procedure is indicated in the beginning cicatricial stage, where roughened and ulcerated follicles still remain; the latter, where the follicles have been replaced by connective tissue, and the cartilage, while still hypertrophied, is undergoing retrograde changes which result in a distortion of the lid. In some cases the lids become everted. Entropion, however, is most common. Pannus that forms in the hypertrophic stage is prolonged into the cicatricial by distortions of the lid-margins, or an irregularity in the cartilage itself.

The operation of removing the cartilage and conjunctiva is termed combined excision, and is briefly described as follows: The upper lid is doubly everted by means of fixation forceps and horn. A horizontal incision is made through conjunctiva alone at the junction of ocular and palpebral conjunctiva (Fig. 1). The cut margin of the bulbar conjunctiva is slightly undermined, and three sutures are passed equidistant. The sutures are sufficiently long to admit of a needle at each end. The lid is now singly everted, and another incision 2.5 mm. from, and parallel to, the lid-margin is made through conjunctiva and cartilage (Fig. 2). The ends of this incision are made to unite with the posterior one, and the conjunctiva and cartilage are gently dissected away, care being taken not to remove any of the tissues beneath the cartilage, and to leave a very thin strip of cartilage above, if possible, to prevent injury to the attachment of the levator muscle. Next, the three sutures placed in the bulbar conjunctiva are drawn forward, each being armed with two needles, and are passed from within out, one end passing through the cut edge of the cartilage, the other just posterior. This causes coaptation of the bulbar conjunctiva with the 2.5 mm. strip of conjunctiva remaining; the fornix is obliterated. The sutures are tied over a wick of gauze, and the operation is completed. The diseased tissue has practically been removed, and

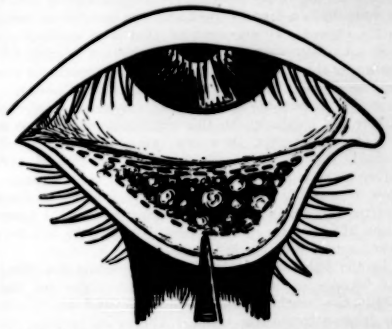

Fig. 3.—Lower lid everted; lines of dashes, lines of incision.

thus we accomplish in half an hour what Nature takes years to do.

The results in a hundred or more of these patients, operated on by Dr. Wootton, myself and various other members of the staff of the Manhattan Eye and Ear Hospital during the past two years, demonstrate beyond doubt that this is the most successful means known of combating this condition. Careful statistics of these cases were not made, but the percentage of cure has been at least 75 per cent. By this I mean a complete arrest of all inflammatory action, a rapid clearing up of pannus, except in those cases in which ulceration had taken place, with resulting permanent opacities.

A resort to tarsal resection alone is less frequent, and the results, when the operation has not been done until late, less gratifying. The procedure is simple. The lid is everted, an incision through conjunctiva and cartilage is made 2.5 mm. from, and parallel to, the lid-margin, the cartilage is carefully dissected both anteriorly and posteriorly, removed, and the conjunctiva sutured in its original position, in a manner similar to that described in the preceding operation. Neither of these operations restricts the motility of the eye-ball, or interferes with

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the movement of the lids. They relieve ptosis and entropion rather than produce them, and, aside from a slight furrow or fold in the skin which is sometimes more than normal, produce no outward deformity. In the majority of cases pannus begins to clear up in a few days and the progress is rapid. Granulations sometimes spring up in the line of incision, especially if coaptation is imperfect, and may retard recovery. These may be removed with a strong solution of silver nitrate, or even the stick, provided only granulations are touched. Occasionally a dislocated eyelash becomes a source of irritation to the cornea. Such eyelashes should be removed with electric needle, or else regularly with cilia forceps.

Trachoma involving the lower lid does not lead to the bad results that are produced by the upper; where there is pronounced involvement, however, it acts as a source of constant irritation and retards recovery. Removal of the palpebral conjunctiva alone is here indicated, since the disease does not seem to involve deeper structures; besides a removal of the tarsal cartilage would result in immediate entropion. The procedure is simple, the two lines of incision being similar to the ones in the upper lid (Fig. 3), care being taken not to encroach on the bulbar conjunctiva behind, or through the tarsal cartilage in front. The conjunctiva is dissected away, and the raw surface is left to granulate and cicatrize over. The cartilage being left in place, no deformity follows. Should granulations become too exuberant, they should be removed by scissors or cautery. In a few weeks the surface has become smooth.

40 East Forty-First Street.

A NEW PNEUMO-ELECTRIC PROCTOSCOPE AND SIGMOIDOSCOPE

FRANK C. YEOMANS, M.D.
NEW YORK

Rectoscopy and sigmoidoscopy are now firmly established as the scientific method of examining the terminal segment of the large intestine. In patients having symptoms referable to the large bowel, it is no longer a question of the value of rectoscopy and sigmoidoscopy, but of the simplest and most efficient instrument for this purpose. Hitherto the practical methods of direct electric illumination of the proctoscope have been by carrying small incandescent bulbs near the distal end of the tube on insulated carriers.

Previous attempts at direct illumination of proctoscopes by a light within and at the proximal end of the tube have been few and the resulting instruments complicated and unpractical. Recently, however, Dr. James R. Hayden ingeniously conceived a new principle of thus lighting a tube and his idea has been cleverly executed in the Hayden urethroscope. By his courtesy I have adapted the same system of lighting to the proctoscope, simplifying the tube, however, to meet the requirements of proctoscopy and sigmoidoscopy.

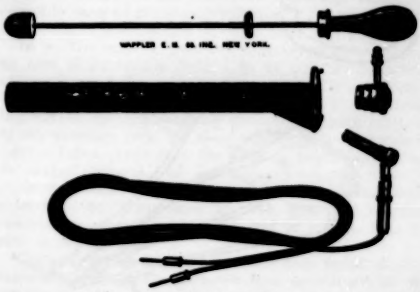
The new proctoscope consists of:

A. A tube 10 inches long and of seven-eighths inch diameter, graduated in inches, its distal end slightly oblique and the proximal end fitted with a large flange with milled edge and a small segment cut from one side to prevent rolling. An auxiliary tube perforates the flange and joins the main tube at an angle.

B. Illumination is direct and is obtained from a small but powerful electric bulb which is covered with a capsule bearing a plano-convex lens so set that the collected rays are refracted at a compensating angle to the light-carrier. The light is mounted on a carrier which fits accurately by a conical fitting into the auxiliary tube while only the lens projects into the main tube, focusing all the rays at its distal end and in no appreciable degree interfering with the vision of the observer or the introduction of instruments for examination, local applications or operation.

C. A metallic plug closes hermetically the proximal end of the examining-tube by a conical fitting and contains a glass window which magnifies the illuminated field at the distal end of the tube. This plug is perforated at the side for a small offset with a nipple for the attachment of a hand bulb to inflate the bowel to any desired extent. The conical fitting of window and light-carrier prevents escape of air when pneumatic pressure is applied and there is great facility in removing or inserting light or window.

D. The obturator has an olivary tip which facilitates the introduction of the tube, and a broad handle so that it does not roll on a flat surface.



Pneumo-electric proctoscope.

The tubes are of three sizes, (1) proctoscope, 10 inches long and of ⅞ inch diameter; (2) sigmoidoscope, 14 inches long and of ¾ inch diameter; (3) infant's proctoscope, 9 inches long and of ½ inch diameter, for examining children and strictures.

The same light-carrier fits all these tubes, but a smaller window is used for the infant's proctoscope. For the general practitioner the 10-inch proctoscope will be found most useful and will fill all requirements in the great majority of cases. The source of light may be either a six-cell dry battery or the street current with the usual electric controller interposed.

The features of this new instrument are:

1. Simplicity.
2. The fact that the instrument is sterilizable by boiling.
3. Direct illumination by a substantial bulb which will not burn out easily.
4. The same light-carrier for all tubes.
5. Thorough practicability for the examination, diagnosis or treatment of all abnormalities occuring within the rectum or sigmoid flexure below its apex.

46 West Forty-Eighth Street.

GASTRO-ENTEROSTOMY

TECHNIC OF THE OPERATION WITH THE USE OF A NEW INSTRUMENT

ADDISON G. BRENIZER, A.B., M.D.
CHARLOTTE, N. C.

The abdomen is opened by an incision about 5 inches long and 1 inch to the right of the middle line, beginning about 2 inches below the costal arch and extending the mentioned length to above the navel. The stomach is exposed, below which is the transverse colon and the omentum covering the loops of the small intestine.

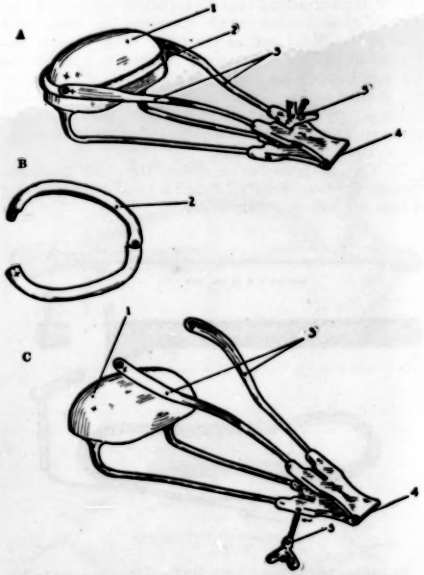


Fig. 1.—Instrument for gastro-enterostomy. A shows the instrument articulated and locked as seen applied in Figure 2: a hollow convex elliptical hemisphere (1) over which an elliptical band (2) corresponding in shape fits snugly. The hemisphere and the band are carried and supported on the two prongs (3) working on a hinge (4) and locked by a thumb-screw (5). The superior prong grasps the band between its arms by the fitting of two little pegs on the arms into two little pits on the band. C shows the thumb-screw released, the two prongs opened on their hinge and the band removed from the grasp between the arms of the superior prong. B shows the band itself opened on a hinge at one extremity and the break in the band at the other. One of the little pits for receiving the pegs on the arms of the superior prong is indicated. The numbers in A, B and C correspond.

The prongs of the instrument are opened on their hinge, the superior prong grasping the closed elliptical band (Fig. 1, A, B and C). The elliptical band mounted on the prong is pushed up, gathering omentum and transverse mesocolon and applied to the transverse mesocolon and with this structure interposed to the posterior wall of the stomach, directly in the middle line of the body. The convex hemisphere, elliptical and corresponding in shape to that of the band and made to fit into it, carried on its prong, is applied to the anterior wall of the stomach, opposite the band. The two prongs are pressed together, articulating on their hinge and thus carrying interposed between hemisphere and band from before backward: the anterior and posterior walls of the stomach and the transverse mesocolon. Now the omentum and transverse colon, held loosely between the locked prongs of the instrument, are carried upward out of the field as the instrument is everted.

The small intestines are exposed and the first loop of jejunum distal to the duodenojejunal plica is chosen and clamped with an intestinal clamp (Fig. 2).

The thumb-screw is tightened just enough to produce a slight paleness of the transverse mesocolon seen within the band.

The omentum, transverse colon and stomach thus held in the grasp of the instrument may be moved with perfect control of the field.

A vertical slit is made through the transverse mesocolon, exposing the serous covering of the posterior wall of the stomach and the slit held wide open by a stitch to either side.

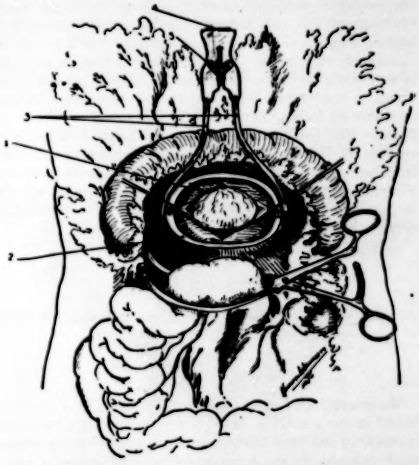


Fig. 2.—The omentum and transverse colon raised up, the relation between the posterior wall of the stomach seen through a slit in the transverse mesocolon and the first loop of the jejunum distal to the duodenojejunal plica. The instrument is in place and the intestinal clamp applied. It is clearly shown how the omentum and transverse colon are held out of the way between the prongs of the instrument and how the posterior gastric wall is pushed through the slit in the transverse mesocolon by the convex hemisphere being made to approach and appose the elliptical band and how it is held in between these two parts of the instrument. The numbers correspond with those of Figure 1, A, B and C.

The stomach and intestine are approached, a strip of gauze laid between them, apposed by a continuous silk suture. The region is packed off with gauze. Parallel incisions are made into the stomach and intestine about 2 inches long down to the mucous membrane. Another continuous silk suture is laid, uniting muscular coats of stomach and intestine along the lower lips of the incisions and ends left long at each angle. Now the mucous membrane is opened, the small amount of intestinal contents sponged away, using at each touch of the sponge a new one, for fear of soiling the region. The mucous membranes of the stomach and intestine are united by an in and out continuous catgut suture. The mucous membranes are closed all the way round and the opening between stomach and intestine established. (It

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is best to discard the instruments used in opening the mucosa as they carry some contamination). The second and first continuous silk sutures are picked up and continued all around the anastomotic opening uniting first the musculature and serous coverings and reinforced by the continuance of the first suture dipping down through the muscularis mucosæ. Especial attention should be given in rounding the angles, that the union be secure. The anastomosis is firmly established through the elliptical band which surrounds the opening on the outside and which must be removed.

Removing the elliptical band and instrument is quite a simple story, as simple as removing the intestinal clamp. The thumb-screw is loosened, thus allowing the two prongs to open on their hinge. The two arms of the prong bearing the band are pulled apart and the band allowed to fall free. The band in turn is opened on its hinge and slipped from around the anastomosis between stomach and intestine. The intestinal clamp being removed, the omentum is allowed to drop back in place.

The abdomen is closed by a continuous catgut suture uniting the peritoneum, interrupted catgut sutures for the fasciæ and the skin apposed by means of the small silver clamps of Michel.

After the second day the patient begins to take liquids in small quantities by mouth. The silver clamps are removed on the fourth day. The patient should reach his feet on the tenth day and leave the hospital on the fourteenth day.

There is certainly no more danger in the operation itself, but only in complications from the side of general and local conditions, which latter can be avoided by the choice of the proper operation and the proper technic in carrying out this operation.

The accepted operation of choice is the posterior gastro-enterostomy, an anastomosis between the most dependent portion of the posterior gastric wall over the antrum and the first loop of the jejunum distal to the duodenojejunal plica, through a rent in the transverse mesocolon. The opening between the stomach and the intestine should be large—larger than it is possible to produce with a Murphy button; the outflow of gastric and intestinal contents and bleeding should be absolutely prevented; the apposition and union should be perfect.

The difficult points to carry out in this operation are:

1. Holding and maintaining the omentum, transverse mesocolon and stomach above the field of operation, without removing these organs from the abdominal cavity; a condition much more favorable than having them surrounded by hot wet compresses.

2. Passing a sufficient surface of stomach through the transverse mesocolon and holding it there so as to make the necessary wide opening and without doing, through handling (pressing and tugging), undue injury to the stomach-wall.

3. Preventing the outflow of any stomach or intestinal contents.

4. Control of hemorrhage, without immediate ligation and usually without ligation at all.

With the operation of choice, the posterior gastro-enterostomy, with the use of this instrument (Narath and Brenizer) and following the technic I have described it seems that all demands may be perfectly carried out.

The instrument may be employed equally as well in doing an anterior anastomosis where the posterior is too difficult or impossible, as will appear evident on considering the the instrument.

902 Realty Building.

A CUTANEOUS REACTION IN GONOCOCCAL INFECTIONS*

ERNEST E. IRONS, M.D.
CHICAGO

In 1908, while studying the effects of gonococcal vaccines in gonococcal arthritis, I noted that the subcutaneous inoculation of dead gonococci in persons suffering from gonococcal infections frequently was followed in from twelve to twenty-four hours by local and general reaction.[1] This reaction consists of an area of redness, swelling and tenderness at the site of the inoculation, often an increase in pain and tenderness in the affected joints and other localizations, together with symptoms of general malaise, and sometimes increase in fever and leukocytosis. These phenomena resemble those seen in the tuberculin reaction, and are of value in the diagnosis of obscure cases, in which gonococcal infection is suspected.

This reaction has been observed by Bruck[2] in epididymitis, by Reiter[3] in pelvic infections in women, and also by others. Bruck has described a "cutireaction" in gonorrhea on injection of gonococcal vaccine.

In recent experiments with glycerin extracts of the gonococcus I have found that a well-defined cutaneous reaction, similar to the cutaneous tuberculin reaction, occurs in cases of gonococcal infection, when the extract is introduced into the skin by the method of von Pirquet.

In positive cases in from twelve to twenty-four hours, an area of hyperemia from 5 to 10 mm. in diameter appears around the point of inoculation of the extract. Frequently a definite papule develops. The control inoculation, using a similarly prepared glycerin extract of the washings from the same number of uninoculated culture tubes, shows only the point of needle puncture. In normal persons, and in those suffering from non-gonococcal infections, the inoculation of the gonococcal extract produces no more reaction than the control inoculation, or at most a small area of redness 2 to 3 mm. in diameter.

Cases of gonococcal infection have been tested simultaneously with extracts prepared from several strains of gonococci, singly or combined in one preparation. The reaction to one strain is occasionally more pronounced than to the others. This observation tends to support the view that various strains of the gonococcus may differ in the reactions of immunity which they produce, and a combined extract of many strains may be desirable for practical use. The cutaneous inoculation offers several obvious advantages over the subcutaneous injection of vaccines. Like other tests, it no doubt will be found to have its limitations, and its value in the diagnosis of gonococcal infections is now being tested.

122 South Michigan Boulevard.

OBSERVATIONS ON THE OXYURIS VERMICULARIS, OR COMMON SEAT-WORM

PHILIP ATLEE SHEAFF, M.D.
PHILADELPHIA

Early one evening a male patient, complaining of itching about the anus, such as is common when seat-worms are present, received an enema of infusion of quassia chips, shortly thereafter expelling a portion of the fluid, which contained a

* From the Memorial Institute for Infectious Diseases.
1. Irons, E. E.: Jour. Infect. Dis., 1908, v, 279.
2. Bruck: Deutsch. med. Wchnschr., 1909, xxxv, 470.
3. Reiter: Ztschr. f. Gebürtsh. u. Kinderh., 1911, lxviii, 471.

fine specimen of *Oxyuris vermicularis*. This was washed and transferred to a drop of water on a microscopic slide, and examined under the microscope with a magnification of 75 diameters.

The worm, as a whole, presented no movement, but from almost one extremity to the other, with the exception of the awl-like pointed tail, contained, in its inner anatomy, a seething mass of eggs within a tubular structure that was in active state of contraction and expansion in various portions of its somewhat serpentine course.

This canal extended from the cephalic end of the worm to the caudal portion and back again, with numerous turns on itself on the way. One portion of this canal was engaged in shoving an egg, and another portion a great bunch of them, forward, only to be repelled by greater waves of peristalsis sending them back again, until overcome by still greater contractions which forced the ovular mass onward to the terminal portion of the canal. This opened at right angles to the body of the worm, back of the cephalic portion on the right side.

The contents, on reaching this point, seemed to rest awhile, as it were, in the "quiet before the storm," when presently a series of most violent contractions would occur accompanied by the discharge of the eggs, one at a time, from the body of the worm.

At times one or two made their exit in orderly succession, and on other occasions the violence and rapidity of their departure reminded one of the action, in miniature, of a modern magazine rifle.

After transferring the parasite from one slide to another and thus securing a half dozen specimens of the ova in "pure culture," I transferred it to a slide, allowing the water to evaporate, and then mounted the specimen in Canada balsam.

Oxyuris vermicularis with ova just deposited.

The uterine contractions still continued, less forcibly however, and not until the entire mass of ova within the worm had been expelled into the balsam did such muscular action cease. (The specimen is shown at this stage in the sketch.)

The entire time for the discharge of all the eggs occupied more than two hours. The eggs are elliptical in outline, one side of the ellipse being of greater convexity than the other, with a capsule light greenish yellow in color, and measuring over all 28 by 51 microns.

The worm is 6 mm. long and presents a crenated appearance in its anterior third.

4008 Baring Street.

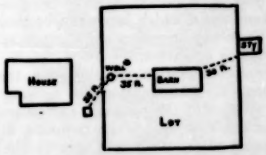
A MILK-BORNE TYPHOID EPIDEMIC

H. H. THOMPSON, A.M., M.D.
NOBLESVILLE, IND.

Noblesville is a typical county seat town of the central part of Indiana, with a population of about 5,000, where, previous to the year of this milk-borne epidemic, there had been only a few scattered cases of typhoid yearly. The sewage system was good and of ample proportions, and the city's water-supply came from deep-drilled wells, the ones supplying the largest amount of water being 300 feet deep and well cased. The principal milk-supply was from a dairy conducted by a man who made every effort to supply the people with pure milk and who tried in every way to run a strictly modern plant. But, as in every other city, there were several who sold milk in different parts of the city. Among these was a Mrs. H., who, living a mile from town, had established a milk-route that supplied about thirty-five families.

During the latter part of August and the whole of September, 1906, her husband suffered a severe attack of typhoid with a marked relapse. His case was a serious one and marked by three hemorrhages of some considerable moment. He had contracted the disease while working at his occupation, that of baker, in a nearby city where the disease was at that time prevalent. During the relapse of his disease he had been attended by a capable man who gave explicit direction as to the proper care of the excreta, but it is doubtful if they were carried out, as the patient was nursed by his wife and daughter. During the early days of the attack, however, and before the nature of the attack was definitely determined, all excreta were thrown into the privy on the premises without any attempt at disinfection, nor was the vault later properly cared for with any disinfecting material.

About the middle of January, 1907, an epidemic began in Noblesville, lasting through February. In all twenty-five cases developed during that time, three of which ended in death; and all but a few were of rather more virulence than usual. The city water was repeatedly examined and the results did not explain such a state of affairs. Then attention was directed to the milk-supply



of the city. It was very quickly ascertained that, of the eighteen families affected, fifteen were purchasing their milk from Mrs. H., these families, too, being the only families in which there was more than one case.

An inspection of the dairy and methods of Mrs. H. showed a frightful and shameful state of affairs. It was her custom, since she had only four cows of her own, to collect the needed extra milk from the neighboring farmers night and morning and keep it in dirty cans from ten to twelve hours till bottled for delivery. Asked as to how she cared for her cans and bottles, Mrs. H. replied that she "washed them with suds and then rinsed them in the clear, cold water from the well." The accompanying diagram shows the location of the well and out-buildings and from their relation it will be readily seen how this "clear, cold water from the well" was the intermediary between the typhoid and the milk.

As the diagram shows, the well was situated directly about 20 feet to the rear of the house within the barn lot. This is a "dug well," 30 feet deep, walled with brick and with a driven well in the bottom, 30 feet deeper. Thirty-five feet farther on in the lot was a cow stable, back of which, about 30 feet, was the hog-pen and shed. At the time of my visit the roof of this was encumbered with carcasses of two newly-born lambs on which the chickens were greedily feasting. Thirty-five feet to the southwest of the well was the privy into which, during the previous August and September, had

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been thrown the discharges from her husband, then suffering from typhoid. This privy was open and the walls of the vault made of boards which were badly rotted. The open fall and winter with plenty of rain had really made of this well a cesspool for the drainage of the entire place.

At this time a bacterial examination of milk from this place showed more than 9 million bacteria per cubic centimeter with streptococci, but no typhoid; and the water from the well gave the following analysis:

Odor, very slight. Color, 00. Turbidity, marked. Sediment, much reddish. Free ammonia, 0480. Albuminoid ammonia, 0010. Nitrates, 0100. Nitrites, 0000. Chlorin, 5000. Total solids, 36.6. Fixed solids, 30. Hardness, 26.3. Iron, 0.22. Bacteria, 35 to the cubic centimeter.

Deeming this evidence sufficient, I ordered a discontinuance of the sale of milk from this place, and coincidently the typhoid stopped.

DISTRIBUTION OF CASES OF TYPHOID BETWEEN THE DAIRY ROUTES

Date Reported	H. Dairy Cases	Other Dairies Cases	Date Reported	H. Dairy Cases	Other Dairies Cases
1/19	1	.	2/10	1	.
1/25	2	2	2/11	1	.
1/26	4	.	2/13	1	4
1/27	1	.	2/23	3	.
2/1	3	.	2/28	1	.
2/5	1	.			
			Total,	19	6

Of this total of nineteen cases on the H. route there were fifteen families affected, or about one-half the number of families supplied.

Evidently the contamination was carried from the vault to the well and thence, in "the clear, cold water from the well," to the milk-cans and bottles and thence to the unsuspecting consumers. Though the typhoid bacilli do not live long in water, it has been proved that they may exist for weeks and even months in the soil. In this case they had lain in the privy from August, until the heavy rains of December had caused a drain into the well.

Since this epidemic occurred the state has provided for a more or less rigid and systematic inspection of all dairies, but I believe that such disgusting details and conditions still exist in many places, especially the smaller cities and towns. The large cities have of necessity rigid rules and inspection of their supply, and the smaller cities and towns must realize this danger and adopt plans for their protection.

THE VALUE OF CYSTOSCOPY IN SURGICAL DISEASES OF THE KIDNEY*

F. WEBB GRIFFITH, A.M., M.D.
ASHEVILLE, N. C.

In cystoscopy we have a means of exact diagnosis which is not generally utilized. In the male the electric cystoscope is used, while in the female we may use either the electric or the open-air method, the technic of which I shall briefly describe. I use, in women, exclusively the Kelly air-cystoscope, not because better results are obtained by it, but because, (1) its simplicity and (2) because, as an assistant to Kelly for a number of years, I am far more familiar with that method.

* Read by invitation before the Tri-State Society of the Carolinas and Virginia, at Columbia, S. C., Feb. 21, 1912.

The external urethral orifice is thoroughly cleansed with boric acid solution, the patient then catheterized, and the catheterized specimen of urine saved in a sterile vessel for microscopic, chemical and bacteriologic examination if desired. A sterilized medicine dropper is then filled with 10 per cent. cocain which is injected into the urethra. The patient is then placed in the knee-chest position, and the urethra dilated. The cystoscope, which is simply a hollow tube, is introduced, and as soon as the obturator is removed, the bladder dilates from atmospheric pressure. By means of a head-mirror, light is thrown into the bladder, and a direct and thorough examination can be made. The cystoscope can then be turned to either side, and urine collected through it from either ureter. This gives a fair, although not absolutely accurate, method of comparing the urines from the two sides. A catheter may be run into the kidney and urine collected directly from that organ, while urine is collected at the same time from the other kidney, transvesically. If further and more accurate comparison of the functions of the two kidneys is desired, a catheter can be run into the opposite kidney. The urines obtained from the kidneys are subjected to bacteriologic, chemical and microscopic examination and compared with the mixed urine obtained from the bladder.

The patient is now turned on her back, each catheter connected with a sterile graduated vessel and the following observations made:

1. The amount of urine collected from each kidney in a definite time. The longer the time the more accurate the comparison. If we collect for only a few minutes, there is apt to be a tremendous error. For example, suppose the right kidney is hydronephrotic, holding 20 c.c. of urine and the left kidney is normal. During the first ten minutes the hydronephrotic sac will have emptied itself of the 20 c.c., while the normal left kidney was secreting possibly 5 c.c., making it appear that the right kidney was doing four times the work of the left, while, as a matter of fact, that 20 c.c. stored up in the kidney pelvis might represent several hours' work of the right kidney. Each succeeding ten minutes that the urine is collected will show a gain for the left kidney and in the course of an hour the true state of affairs will be apparent.

2. The manner in which the urine is secreted. The normal healthy kidney expels its urine in intermittent spurts of several drops at a time, while in a diseased kidney it is usually a continuous dripping, like that caused by a leak in the roof of a house. So, in the example mentioned above, the left kidney would have the regular intermittent spurts, while the right kidney would at first have a profuse continuous flow until the hydronephrotic sac was emptied and then start in with its dripping.

3. The estimation of what each kidney can do under stimulation, or what it could do provided the other kidney were removed. After having collected the urine for half an hour to determine what the kidneys are doing without stimulation, have the patient drink two or three glasses of water. Before very long there will be an increased output of urine, and if the one kidney is markedly diseased and the other has developed compensatory power, the difference in the increased output will be very striking. In other words, the healthy kidney has far greater power of responding to increased strain than has a diseased kidney.

4. The estimation of the functional activity of the kidneys. It is far beyond the scope of this paper to discuss the various tests which are employed to determine the relative activity of the two kidneys. Suffice it to say that cryoscopy, electricial conductivity of the urine, phlorizin and the numerous dyes have an important place in many of the diseases of the kidney and in the future will probably be of still greater value. As the reliability of these tests are dependent on a careful separation of the urine from the two sides, it is apparent that catheterization of the kidneys is almost a sine qua non. With these few cursory remarks, I shall briefly discuss some of the more common surgical diseases of the kidney.

TUBERCULOSIS OF THE KIDNEY

In western North Carolina, the study of tuberculosis is of the greatest interest, and I regret to say that we as surgeons are about ten years behind the internists.

We all remember when a persistent cough and slight fever were ascribed to "a touch of bronchitis," the general malaise to malaria, and the loss of weight to overwork. But now even the laity are beginning to recognize those symptoms as suspicious of pulmonary tuberculosis. Tuberculosis of the kidney is even more insidious in its onset than tuberculosis of the lungs; it may persist for months without symptoms.

The early symptoms are usually those of a cystitis, and only when the disease is moderately advanced is it obvious that the kidney is involved. We are too prone to think of a case of tuberculosis of the kidney as one with retention of pus, hematuria, pain, emaciation or perinephritic abscess. Unfortunately these symptoms do exist in many cases when first seen by the surgeon, but they are the manifestations of an advanced stage. When it becomes generally recognized that a "cystitis" which does not respond to the ordinary treatment is suspicious of tuberculosis; that tuberculosis of the bladder is seldom primary, usually secondary to the kidney in women, and to the kidney and genitalia in men; that persistent acid pyuria points strongly to tuberculosis; that the presence of a large amount of albumin out of proportion to the amount of pus usually indicates renal rather than vesical origin; when these few facts are sufficiently emphasized that they will be known to every physician, then, and not until then, will the results be different.

We have a great advantage over the internist in that we can first remove the focus of infection, and then put our patient under the same climatic, dietetic and hygienic treatment which has proved so beneficial in pulmonary cases. But I wish to emphasize again that we must get the cases early, and there is no other renal disease in which the cystoscope is of greater value than in the diagnosis of incipient renal tuberculosis. It is just as necessary for the detection of an early lesion as is the stethoscope in the examination of early pulmonary tuberculosis. It not only enables us to make the examinations mentioned at the beginning of this paper, but also to obtain urine from both kidneys to search for the tubercle bacilli and for animal inoculation.

NEPHROPTOSIS

The use of the cystoscope in nephroptosis or movable kidney is chiefly in diagnosis and in the selection of cases for nephrorrhaphy.

I will give a few figures which I have published in a previous article,[1] but which have a direct bearing on the subject. In an examination of over 2,000 cases in the gynecologic dispensary of the Johns Hopkins Hospital, I found that in approximately 20 per cent. of white women, over half of the kidney could be felt. The right kidney was movable about twice as frequently as the left. In colored women I found movable kidney in about 8 per cent., and examination of a small number of men showed it in about 4 per cent. In the first 13,338 gynecologic patients admitted to the Johns Hopkins Hospital, the right kidney was suspended 127 times. It was suspended alone in seventy-two cases, with the left kidney in ten cases, and with other operations in forty-five cases. The left kidney was suspended in thirty-eight cases, in twenty-eight of which there was no other operation, while in the other ten cases the right kidney was also suspended. Of the 13,338 cases admitted, approximately 8,000 were white patients, showing that of all white patients admitted to the gynecologic service, less than 2 per cent. were operated on for movable kidney.

As mentioned previously, statistics carefully taken, with reference to movable kidney among gynecologic patients, indicate that it occurs in 20 per cent. or more of all cases. Thus we see that less than 10 per cent. of all cases of movable kidney in white women are operated on, showing how foolish it would be to advise radical treatment simply because the kidney was in an abnormal position. When then a patient with movable kidney consults a physician because of abdominal symptoms, the question arises, are the symptoms due to movable kidney, or are they due to some other abdominal condition, the movable kidney being merely a coincidence which is not causing trouble?

By far, the best single test for differential diagnosis is artificial injection of the renal pelvis. A renal catheter sufficiently large to fill the ureter is run into the kidney and a known amount of sterile water colored with methylene-blue is forced into the kidney with a syringe. The distention of the kidney pelvis will cause pain, and the patient will usually voluntarily state whether or not the pain is of the same character and in the same location as the pain from which she has been suffering. It has been shown that when the patient can positively identify the pain, we are justified in concluding that the kidney is at fault. At the onset of the artificial pain, the syringe is disconnected from the catheter, and the injected fluid recovered, thus measuring the capacity of the renal pelvis. If during the injection a glass catheter is left in the bladder, any reflux which might occur around the renal catheter would immediately appear externally.

NEPHROLITHIASIS

In this condition the cystoscope is of especial value in corroborating the findings of the *x*-ray, in determining the presence of infection, and in estimating the absolute and relative ability of the two kidneys. Once in a while a scratch-mark can be obtained by a wax-tipped catheter (made by inserting the end of a catheter in a mixture of equal parts of beeswax and olive oil), where the *x*-ray has failed to show a stone. Cabot, of Boston, stated in a recent article that in fifty cases of stone in the kidney, taken from the records of the Massachusetts General Hospital and from his own practice, over 25 per cent. had been previously subjected to an unnecessary operation because of error in diagnosis.

As a rule, it is neither difficult nor dangerous to catheterize a kidney, and if resorted to as routine in

1. Chapter on Movable Kidney, Kelly's Medical Gynecology.

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doubtful cases, it will materially lessen our errors in diagnosis. The following case well illustrates this point:

Patient.—Miss H. S., aged 37, was referred to me in September, 1911, for obscure left-sided abdominal pain. When an infant she had some spinal trouble which left her a semi-invalid for twenty-five years. In March, 1911, she began to have dull pain over the left side of the abdomen but not in kidney region. There were no urinary symptoms, nausea or vomiting. The pain gradually got worse and, although not severe enough to cause her to go to bed, she was practically incapacitated part of each day. She had only one acute attack of pain which lasted for a few minutes.

Examination.—Sept. 20, 1911, showed an undersized woman, greatly deformed from kyphosis and scoliosis. Neither kidney was movable. Abdominal and gynecologic examination was negative. Cystoscopic examination showed that the bladder was normal. Catheterization of the kidneys showed that both were secreting exactly the same in amount and that both urines were normal with one exception. In the left kidney urine there was microscopic blood. The left kidney pelvis held 8.5 c.c. Injection reproduced the exact pain of which she had suffered. The wax-tipped catheter failed to show a scratch-mark. Owing to the great deformity it was very difficult to get a good *x*-ray plate, but after several attempts one was obtained which showed a shadow suspicious of stone. Operation revealed a stone, the removal of which has given her relief.

There are many other pathologic conditions such as pyogenic infections, malignant growths and cystic kidneys, which I should like to discuss, but which would be simply a tiresome repetition. We owe it to our patients and to ourselves to make use of every available method of diagnosis; and in cystoscopy and renal catheterization we have a most valuable method which I fear we are not fully utilizing.

78 Patton Avenue.

ACUTE LYMPHATIC LEUKEMIA

REPORT OF THREE CASES *

W. H. BODENSTAB, M.D.
BISMARCK, N. D.

Leukemia, from the Greek *leukos*, white and *haima*, blood, meaning white blood, is a disease of undetermined cause, characterized by a marked anemia, an increase in the leukocytes, a decided decrease in the red blood-cells and hemoglobin, and lesions in the spleen, lymph-nodes or bone-marrow. Clinically we are able to recognize two distinct varieties: the splenomedullary and the lymphatic type. Splenomedullary leukemia manifests itself by an enlarged spleen and an increase in the polymorphonuclear or granular elements of the blood, together with the presence of a large percentage of myelocytes; while in lymphatic leukemia there is enlargement of the lymph-nodes and an increase in the lymphocytes or non-granular cells. The former is the most common and occurs most frequently in adult life, between the ages of 20 and 40. Enlargement of the spleen is usually the most conspicuous phenomenon and the latter may extend entirely across the abdomen. The lymphatic form is a more rare disease and although it is an affection of the lymphatic system, it is usually associated with a more or less marked enlargement of the spleen. The discrimination between the two forms can only be made by the blood-examination.

Cases of lymphatic leukemia occur, especially in children, in which there is a diminution in the red cells and hemoglobin and a marked poikilocytosis. Nucleated red cells are present and a marked increase in the white cells, which consist almost entirely of large mononuclear elements without granulation. There is usually fever and the cases run a course very similar to an acute infectious disease. This form of leukemia is characterized by its short course and the severity of its symptoms, by the frequency of hemorrhagic diatheses and the rapidly developing cachexia, which soon ends in death. To this class belong three cases which have come under my observation within the last year with the following histories.

CASE 1.—*Patient.*—G. A., a boy aged 10, whose father and mother are living and well; four brothers and three sisters also living and well. Patient had always been healthy until April, 1911, when he had measles and since then had been ailing. He complained of being tired and weak and occasionally had headaches and pain in the upper abdomen.

He was first seen at his home in the latter part of June, when he complained of the above symptoms, and although he was anemic and had lost some weight, no definite diagnosis was made. The blood showed no leukocytosis, although the lymphocyte count was somewhat high.

Examination.—July 19, he was again seen. He had had nose-bleed several days before, which had been hard to control. The patient looked pale, mucous membranes were anemic, the chest was negative, the temperature 100 F. at 5 p. m. The liver was much enlarged, extending to the umbilicus, tender on pressure, its margin smooth and hard. The spleen was also enlarged and extended 1 inch below the costal margin; it was hard and smooth and the notch could be plainly palpated. The lymph-nodes in the neck, axilla and groin were not markedly enlarged. The urine contained a trace of albumin. The examination of the blood showed hemoglobin 55 per cent., red blood-corpuscles 2,500,000, white blood-corpuscles 21,000. Differential count as follows: polymorphonuclears 4 per cent., large mononuclears 66 per cent., small mononuclears 20 per cent. No eosinophils were found. The coagulation-time was much prolonged, so that solution of ferric subsulphate had to be applied to stop the bleeding from the ear. Patient gradually failed and on July 29 the blood was as follows: hemoglobin 45 per cent., red blood-corpuscles 1,500,000, white blood-corpuscles 45,000, differential count: polymorphonuclear 6 per cent., large mononuclears 80 per cent., small mononuclears 13 per cent., myelocytes 1 per cent. Numerous nucleated red cells were also found.

Course.—July 30 the patient had severe epistaxis and his nares had to be tamponed, but without success, there being constant oozing through the tampon. His temperature rose to 103 F. Patient now became very restless and the next day was unconscious. In this condition he lay for twenty-four hours, when he died from apparent toxemia.

CASE 2.—*Patient.*—M. E., a young girl of 16, of Jewish parentage, whose family history was negative, had always been well until two years previously. Tonsillectomy at that time without complications. A little over a year ago patient developed a hard indurated brawny swelling in the region of left submaxillary gland. A bad tooth was extracted and an abscess drained externally. One month later a similar condition was found on the right side. In April, 1911, the patient was brought into hospital with severe nose-bleed, and was at that time quite anemic. The blood-picture showed nothing abnormal outside of a secondary anemia. She was fairly well all summer but admitted having had frequent headaches and swollen ankles, and occasional attacks of nose-bleed which, however, were stopped by applying household remedies. The present illness began three weeks before admission, when patient started to menstruate. She had flowed continuously ever since so that on her admission to the hospital at this time she presented the following picture:

Examination.—Patient very pale, dyspneic, blood-vessels in neck pulsating violently, about 140 to the minute. Chest negative, liver negative, spleen could just be felt on inspira-

* Read before the Sixth District Medical Society, North Dakota, Dec. 14, 1911.

tion, abdomen otherwise negative. Glands were not markedly enlarged.

Blood-examination showed hemoglobin 20 per cent., red blood-corpuscles 320,000, white blood-corpuscles 58,000; differential count: polymorphonuclears 13 per cent., large mononuclears 75 per cent., small mononuclears 10 per cent., eosinophils 2 per cent. A high grade of poikilocytosis was present, and a great many nucleated red cells were found. The blood was very light colored and barely coagulated. The uterine hemorrhage was promptly controlled but patient died two days later, apparently of weakness.

CASE 3.—*Patient.*—O. J., a boy of 11, was first seen June 24, 1911. His family history was negative. He had been in good health until the previous May, when patient seemed to have no ambition. He had no pain but complained of a feeling of fulness in stomach. He frequently bled at the nose, but since the other children had nose-bleed, the parents thought nothing of it. The boy was getting paler, however, until finally the father brought him to the hospital on June 24.

Examination.—Patient was a very pale and emaciated-looking boy, temperature 101 F., pulse 140. The chest was negative, except for a soft blowing systolic murmur over the left heart. The abdomen was much distended, the liver reaching down to the umbilicus while the spleen extended six inches beyond the costal margin; both were smooth and hard. The lymph-nodes of the axilla and groin were slightly enlarged and rather hard. The urine showed albumin and casts. The father insisted on taking the boy home so only one blood-examination could be made which was as follows: hemoglobin 35 per cent., red blood-corpuscles 375,000, white blood-corpuscles 125,000. Differential count: polymorphonuclears 3 per cent.; large mononuclears 90 per cent., small mononuclears 7 per cent. A few normoblasts were found but no megaloblasts.

A bad prognosis was given and the patient went home, where he died a few weeks later. The nature of his death I was not able to get.

The history in Case 1 is at first somewhat puzzling. Following closely on an attack of measles, the condition might have suggested a tuberculous infection. The normal white count with relatively high lymphocyte count and without any definite physical signs were quite suggestive of tuberculosis. The rather sudden increase in the large mononuclear non-granular type of cells together with the consequent decrease in the number of red cells, and the tendency to hemorrhages and the appearance of nucleated reds made the diagnosis of acute lymphatic leukemia the only plausible one. The ratio of the white cells to the red cells necessary to distinguish leukemia from leukocytosis differs according to different authors, some including all in which it is 1 to 50 or lower, others excluding those in which the ratio is 1 to 20 or higher. In this case the ratio on July 19 was 1 to 115, but within ten days it dropped to 1 to 33. This circumstance, together with the nature of the white cell increase, and the rapidly developing toxemia and death leave no question in my mind as to the correctness of the diagnosis.

Case 2 presents another type of the same condition. When the patient was first admitted to the hospital nothing was found indicating disease of the blood-making organs, unless the infection in the submaxillary glands could be interpreted as being of hematogenous origin. On her second admission, after a profuse hemorrhage from the nose, the blood showed evidence only of a secondary anemia. Hemophilia was thought of, but practically excluded because the patient did not bleed much when the abscesses were opened. Then followed the third admission with a practically clear blood-picture six months later. The red blood-cells were very pale and irregular in this case and very nearly approached the type of pernicious anemia. The white blood-cells presented a great many different forms, among them polymorphonuclear cells without granules and unripe and very young lymphocytes of the large variety. The nucleus took a very faint stain and in some of them could be seen nucleoli. Some nuclei were oval and some notched. The cell-body in many of the cells was irregular and marked degeneration could be seen.

In Case 3 we have a very characteristic blood-picture which shows practically only one form of lymphocytes. These are very uniform in size, shape and staining qualities, and although the ratio between the white and red cells is only 1 to 3, we have more mature cells and a less acute case than in Case 2. The enormously large spleen and liver are very interesting and would lead one to think more of myelogenous leukemia, but for the blood-examinations.

We have here three cases of undoubted acute lymphatic leukemia, all the patients dying within thirty days from the time the disease was diagnosed, and although the symptoms and blood-findings in all three were in a general way similar, there existed a marked difference individually.

THE PHENOLSULPHONEPHTHALEIN TEST OF RENAL SUFFICIENCY

JAMES L. WHITNEY, M.D., SAN FRANCISCO

In employing the above-named useful test all observers have encountered a difficulty which makes accuracy of reading impossible, namely, the yellowish color of the diluted urine as compared with the standard solution. To obviate this difficulty Cabot[1] suggests using the patient's urine in proper amount in preparing the standard solution. A simpler method which will be found perfectly satisfactory is to interpose a piece of fairly vivid yellow glass between the eye and the solutions to be compared, since viewed through such glass urine and clear water are almost indistinguishable. This applies, of course, both to Cabot's system of test-tubes and to any more complicated colorimeter (Geraghty-Rowntree).[2]

240 Stockton Street.

Therapeutics

TREATMENT OF PNEUMONIA

Progress in therapeutics is essentially slow. While a half century brings to light some remarkable changes in the conception and treatment of such a disease as pneumonia a comparison of the measures advocated in two editions of Osler's "Practice of Medicine" at an interval of half a decade shows comparatively little change. The intelligent application of the principles appearing in the 1905 edition would give much the same result as would be gained from following the latest edition. A review of the latest treatment of this disease leads to some interesting reflections.

How poor a basis for therapeutics is given by mere subjective symptoms is shown by the frequent occurrence of abdominal pain in pneumonia when no abdominal organ is at fault.

Thus in the 1905 edition Osler said:

The pain may be altogether abdominal, either central or in the right iliac fossa. Crozier Griffith reports eight cases of

1. Cabot and Young: Boston Med. and Surg. Jour., Oct. 12, 1911, p. 549.
2. Geraghty and Rowntree: THE JOURNAL A. M. A., Sept. 2, 1911, p. 811.

this simulation of appendicitis by pneumonia and has collected thirty-four cases from the literature, many in adults. The operation for appendicitis has been performed.

In 1911 Osler adds to this:

A catarrhal form of appendicitis may occur coincident with the pneumonia. In other instances the pain may be in the region of the pancreas, associated with meteorism and high fever, so that acute hemorrhagic pancreatitis may be assumed as in one of Halsted's cases in 1905. All the symptoms were abdominal and the apex pneumonia was not discovered.

Such symptoms indicate with what care all parts of the body should be examined to avoid serious mistakes.

Before beginning the treatment of so serious a disease as pneumonia one should have not only an exact diagnosis of physical and vital conditions, but a clear conception of the nature of the process and the sources from which danger threatens. In pneumonia we have a local obstruction in the lungs combined with a poison circulating in the blood; both may be sources of danger, but, as Osler repeats, "death is most frequently due to the action of the poisons on the vasomotor centers with progressive lowering of the blood-pressure; rarely to direct obstruction in the lungs."

This source of danger is met by the stimulant action of cold in hydrotherapy, which is best practiced by cold sponging, applied limb by limb, in which form Osler regards it as refreshing and beneficial. It not only cleanses and stimulates the skin, but gives tone to the vasomotors, counteracting the depressing effect of the toxins. As additional stimulants of the peripheral blood-vessels, Osler recommends digitalin, hypodermatically in doses of from 0.0015 to 0.003 gm. (1/40 to 1/20 gr.), and strychnin in doses of from 0.0005 to 0.001 gm. (1/130 to 1/60 gr.), as the most satisfactory drugs. Camphor, caffein and musk are also of value. The effect of epinephrin even when given intravenously is too transient to be of value.

The danger from the lowering of the blood-pressure should indicate caution in the use of cardiac and vascular depressants even in the early stage of the attack. Even at the first appearance of consolidation the toxemia may be very pronounced and the use of a heart depressant may be distinctly contra-indicated. Among these cardiac depressants may be placed alcohol, and nitroglycerin. With regard to alcohol, Osler says that it does not seem to raise the blood-pressure in fever or seem to be of much value in progressive vasomotor collapse. F. S. Meara, in Hare's Modern Treatment (Vol. I, p. 717), is more pronounced in his opposition to alcohol and nitroglycerin. He says:

Alcohol has been used in pneumonia, I believe, without justification. I believe it is never a true stimulant. I believe that its chemical structure, its pharmacologic action, and its clinical effects stamp it as a depressant. There are periods of excitation in pneumonia, constituting the so-called typhoid state, when alcohol apparently does good, but it does it as any other depressant or sedative, as morphin, would do it. In the delirium of alcoholic pneumonia it seems to do good, quieting, as the restoration of a drug does for the time being to a drug habitué, or acting as a sedative, as paraldehyd will do. If then it does good under such circumstances, it should not be looked on as a stimulant to be administered in conditions of circulatory failure. Indeed, I believe there are few cases in which the patient would not be better off without than with the alcohol. The arguments for its use as a food should be met by arguments for more rational dietaries in pneumonia. . . .

The use of nitroglycerin is absolutely contra-indicated, for it is a depressant to the vasomotor center, and yet it is a common thing to see this drug given in pneumonia as if it were a stimulant of the highest value.

It is natural to ask, What can be done to arrest or diminish the development of toxemia? Aside from general eliminative measures we can do little if anything. The use of serums has not been successful. Osler says that "recent analyses do not give a very favorable impression of the serums at present in use. Even with Römer's polyvalent serum four of Curschmann's twenty-four patients died." The possibility, however, of an increase of the toxemia and of mechanical obstruction from putrefactive conditions in the digestive tract should be borne in mind. Milk has been quite usually recommended as the sole or the most important article of diet. In a very recent text-book on therapeutics, however (Musser and Kelly's Practical Treatment, Vol. II), H. A. Hare dissents from this exclusive use of milk. He points out that to obtain the needful number of calories or heat units in twenty-four hours, a patient must take between 3½ and 4 quarts of milk, an amount which not only distends the stomach, but overwhelms the kidneys in their effort to excrete this large quantity of fluid. There is nothing so harmful for a patient ill of this malady as to have the stomach disturbed and overloaded. Again, milk is a form of food well qualified to cause flatulence, and tympanites is a complication much to be dreaded. For these and other reasons it is evident that, although milk is a valuable article of diet, it is not to be depended on alone, but used as an adjuvant. Somewhat similar objections hold true in regard to animal broths, which possess, in addition, extractives of animal tissues, which in a nearly related form the system is endeavoring to eliminate as a result of the fever. Moreover, the broths contain a very small amount of solids for the bulk of fluid which must be swallowed to get the proper proportion of nutriment. Broths must not be depended on to any great extent, yet they fill an important rôle in the care of the patient. Hare recommends in place of these articles of diet, carefully cooked, well-seasoned and partly predigested gruels made of rice, barley, wheat and, rarely, oatmeal. If the patient is fed every two hours with a small cup of milk, broth or gruel, his circulation is at no time hindered by a full stomach, he receives an adequate quantity of support and is not disgusted by constant sameness of diet, which finally becomes nauseating. By careful attention to the diet the occurrence of tympanites should be avoided. The amount of liquid given should be sufficient to maintain the action of the skin and kidneys, but excess should be avoided in order that the heart may not be embarrassed by the necessity of propelling too great an amount of fluid through the blood-vessels.

Considerable doubt is cast on the value of the administration of oxygen by inhalation and the view is expressed by Osler that it is not entirely harmless.

A practice to be carefully avoided is the indiscriminate use of expectorants. Of these Hare says the use of expectorants in pneumonia is in the great majority of cases entirely useless and often harmful. F. S. Meara says:

I object to the so-called expectorants, first, because I fear the disturbance to the stomach that may ensue, with impairment of appetite and nutrition, and second, because I am skeptical as to the accomplishment of what they are supposed to do. There are so many able clinicians opposed to my views, however, that I will mention ammonium chlorid as the drug most commonly recommended, which may be used in 3-grain doses every two or three hours.

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MENTAL DISORDERS AND IMMIGRATION

Disorders of the mind may not be a necessary accompaniment of progress in civilization; but modern society feels, as ancient society never did, a responsibility for the care of mental defectives as well as an obligation to protect itself from the increase and spread of such conditions. This fact explains the wide and increasing interest displayed in the relation of immigration to insanity and the increase of mental defectives — an interest manifest alike in medical circles and in the current popular literature. The decision of Solicitor Earl of the Department of Commerce and Labor, referred to in THE JOURNAL recently,[1] concerning the deportation of aliens who become insane within three years of landing, makes a discussion of this question peculiarly pertinent.

While the influence of immigration on the increase of mental disorders is of most vital significance to New York State, it has also a very definite concern for the country at large. This is apparent from the figures presented by T. W. Salmon[2] of the New York State Board of Alienists, who states that New York receives 26 per cent. of all immigrants coming into the United States and is the destination of more than 80 per cent. of the immigrants found on arrival to be insane or mentally defective. More than eight thousand aliens were found in the New York State Hospitals.

The report[3] of the New York State Lunacy Commission to the legislature on Feb. 14, 1912, showed that there were 33,311 committed insane patients in state institutions. Of these, 31,051 were in state hospitals. According to Salmon's figures, over 25 per cent. of these are aliens, who have come as immigrants very largely through Ellis Island. The Lunacy Commission reported 5,573 new patients committed during the year, and 1,383 relapsed patients requiring recommitment. The capacity of the state institutions was exceeded by 3,043.

Of almost equal importance with the group of the insane is that group of mental defectives embraced under the headings of feeble-minded, imbeciles and idiots. The New York Society for the Prevention of Cruelty to Children has investigated these conditions among children of school age, and reports[4] that there are about 7,000 distinctly feeble-minded children in New York, or about 1 per cent. of the school population. This is in addition to an equal number of idiots and imbeciles, and does not include border-line cases or morally defective children. Census statistics show that 30 per cent. of the feeble-minded children in the general population of the United States are the progeny of aliens or naturalized citizens. According to this, at least 3,000 of the feeble-minded children of New York are the offspring of the 9,000,000 immigrants of the past decade.

The last annual report[5] of William Williams, Commissioner of Immigration for the Port of New York, lays particular emphasis on the fact that present methods of inspection are entirely inadequate for the detection of feeble-mindedness. One reason for this Mr. Williams believes to be the insufficient time and facilities for thorough examination as to mental condition. So far is this true that the law is practically a dead letter.

The dangers to the community from this large alien addition to our mental defective class are well known. The probability is that all will become public charges, but the mischief by no means stops with this. There is the more serious danger of feeble-minded or mentally unbalanced offspring, as well as the large contribution made to the criminal element.

Insane aliens as a rule are more easily detected at the Ellis Island inspection than are the feeble-minded, but even here conditions are far from satisfactory. A large proportion of the feeble-minded are children, and time and facilities are lacking for proper examination to detect this condition. The present medical inspection is conducted by the Public Health and Marine-Hospital Service and is efficient except in mental cases. Here the medical officers are hampered by many conditions. Congress has persistently refused the appropriations asked for by the Commissioner of Immigration to enlarge and improve the medical division at Ellis Island. The medical officers there are most seriously handicapped in their work by an insufficient number of interpreters. It is childish to expect the very best-qualified alienist to detect insanity or feeble-mindedness when he cannot converse with the persons he is examining.

Further, the number of medical officers at Ellis Island is much too small for work of the highest efficiency. The number should be increased and should include several who have had the opportunity of special instruction and study in hospitals for the insane. Men who have had such training and who have experience in the actual routine examination of immigrants are the ones who can best work out a satisfactory scheme for detecting a

1. Editorial, THE JOURNAL, March 23, 1912.
2. Salmon, T. W.: Insanity and the Immigration Law, New York State Hosp. Bull., November, 1911.
3. Ann. Rep. New York Board of Alienists, embodied in the Ann. Rep. of the State Commissioner of Lunacy to the Legislature, Feb. 14, 1912.
4. Report of the Special Committee to the Board of Directors of the Soc. for Preven. of Cruelty to Children, New York, Feb. 13, 1912.
5. Williams, William: Ann. Rep. for the fiscal year ended June 30, 1911; commented on editorially in THE JOURNAL A. M. A., Dec. 30, 1911, p. 2142.

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much higher percentage of insane and mental defectives than is done at present, and the whole country will profit by their labors.

Finally, immigrants cannot be held a sufficient length of time for observation of their mental condition. The influential interests of the steamship companies play a determining part in this, because all immigrants detained for any cause are kept at the expense of the companies.

WHO DISCOVERED THE FUNCTIONS OF THE MOTOR AND SENSORY NERVES?

The promulgation of claims of priority is certainly nothing unusual in the literature of medical science. Ordinarily the reader is inclined to neglect the polemical diatribes of the current journals and turn his attention to the more attractive contributions which a horde of untiring investigators are continually adding to our stores of knowledge. But there are occasions when the merits of some startling announcement are called into question or the credit for a classic discovery is disputed. Then we must pause, in the interests of scientific justice, to examine the claims and form a personal estimate.

Few epoch-making discoveries are credited to uncertain agents, though history has scattered illustrations of the division of great honors between different candidates. Now and then one reads of some forerunner of Harvey as the discoverer of the circulation, precisely as the Baconian attempts to impeach the glory of Shakespeare now and then emerge from behind the veil of obscurity. No one takes these incidents seriously. When, however, an enlightened scientist earnestly debates the deserts of an eminent name in medicine there is reason for reflection. The case at hand is that of Sir Charles Bell.[1] Every student of the nervous system is familiar with Bell's law, which is ordinarily formulated to state that the anterior roots of the spinal nerves are motor in function, the posterior sensory. Physiology, pathology and psychology have incorporated the essence of this time-honored discovery into the routine of their teachings and practices.

Professor Augustus D. Waller of London has called into question the validity of Bell's claim to fame in this connection. By a critical examination of the English anatomist's writings he aims to show that the glory of the far-reaching discovery that "the nervous impulses controlling our conscious and unconscious life flow by separate channels from world to brain and from brain to world" belongs unquestionably to Magendie. Bell's claim to the discovery that motor impulses pass by the anterior, sensory impulses by the posterior spinal roots is based on a publication of the date 1811. Magendie clearly demonstrated the facts in 1822[2] when, as the leading physiologist of France, he was at the zenith of his powers. The unbiased reader must admit that at best Bell inferred that "the anterior or 'cerebral' roots serve to govern vital actions." According to Waller, immediately after the announcement of Magendie's clear-cut experiments these "discoveries" were elaborated from 1823 to 1839 by Bell himself and by his two devoted brothers-in-law, John and Alexander Shaw.

A cursory examination of the more prominent textbooks on the nervous system will show an occasional, if not frequent, admission of the contribution of the French investigator. The phenomena in question are sometimes described under the caption "Bell-Magendie law." This is not the place to review the evidence in detail, but we may give the words of one who challenges even the partial deserts of Bell. Speaking of the altered assertions of Bell after the announcements by Magendie, Waller says: "Now so far all this is very human and quite pardonable. A man who has thought round and about something is apt to deceive himself when another man puts his finger on the spot and picks out the plum; he may be forgiven for exclaiming, 'But that's my plum; I found it long ago and showed it to that fellow who says he found it.' A claim of this sort may be good or bad; the claimant may be entitled to credit—all or some or none—according to the evidence that he may have to offer; but he is certainly entitled to nothing but discredit if he sets to work to improve a poor claim by tampering with his own evidence; this, as we shall see, is precisely what Bell did in 1824, when he republished his papers of the three preceding years."

A great discovery deserves a human time-mark. Who was the discoverer of what Galen imagined two thousand years ago? Shall we continue to temporize in our award, or shall we conclude with Waller that "there is no escape from the conclusion that Bell's claim as a discoverer was a carefully fabricated claim and that the discovery of the distinction between motor and sensory nerves belongs entirely to Magendie"?

1. Waller, A. D.: The Part Played by Sir Charles Bell in the Discovery of the Functions of Motor and Sensory Nerves (1822), Science Progress, 1911, vi, 78.
2. Magendie: Expériences sur les fonctions des racines des nerfs rachidiens, Journ. de physiol., 1822, ii, 276.

A RECENT FOOD AND DRUG REPORT

The question is frequently raised whether or not the enormous activity in recent years in the direction of pure food and drug legislation and inspection has been productive of any marked and measurable benefits to the public. Owing to the fact that in most cases those whose duty it is to determine the facts and supply the expert evidence have no power of prosecution, the impression has at times been gained that no useful results follow the mere examination of the products and the publication of the findings. Furthermore, the fact that in a large number of the actual prosecutions the fines imposed have been too small to be, in themselves, serious hindrances to the continuance of illegal methods, has also given the impression of a possible failure of the campaign for reform.

A careful study of the changing character of the products offered for sale from year to year leaves no doubt, however, of the decided progress which has been made in the face of these apparent hindrances. Publicity and education have quietly, though slowly, brought reform. This is shown, for example, in the comparisons of the repeated annual experiences of the prominent analytical laboratories of the country. In illustration we quote from the recent report of the Connecticut Agricultural Experiment Station at New Haven,[1] one of the pioneer institutions in this work in the United States. Of eighteen samples of tincture of iodin from druggists whose product had in previous years been found below standard, no sample showed less than 90 per cent. U. S. P. strength in 1911. What this means is indicated by the figures of 7.03 grams of iodin per 100 c.c. in 1911, in contrast with 4.22 grams of iodin in 1908 or 1909 as an average of all data reported. Similar improvements were found in the lime-water and camphor liniment sold. Such facts speak for the usefulness of consistent drug inspection in a state where intelligent vigilance can be exercised.

The Connecticut report presents a wealth of details which are deserving of consideration on the part of physicians. Among them is an elaborate study of the commercial cod-liver oil preparations. "Cod-liver oil" has long been a name to conjure with in medicine, and no one has done more to invest it with hypothetical virtues than the practitioner himself. Until it shall be demonstrated that cod-liver products have some efficiency other than that presented by any easily digestible fat we must hesitate to look on them as anything more than available foods. The quality of the emulsions dispensed is, as a whole, reasonably satisfactory, especially where they are sold as of U. S. P. strength. Father John's Medicine, though not claimed to be a cod-liver oil emulsion, essentially is one and thus finds its way into this group. But the obvious therapeutic frauds, those products which often under the guise of a legally formulated label, give the impression of containing some subtle virtue of the cod liver other than its oil—"wines of the extract of cod-liver oil"—call for special condemnation.[2] In this group come the familiar names of Hagee's Cordial, with its saccharin and salicylic acid, Narco Wine, and the "tasteless" brands which combine the virtues (?) of cod-liver extract "without any of the disagreeable oily properties"! All contained alcohol, and not the merest trace of oil was found in any of the samples examined. Quoting the Connecticut report: "These data indicate that none of the samples is entitled to be called a cod-liver oil preparation, as none contains either oil or fatty acids and only the merest traces of saponified fat. Hagee's does not even contain this trace. Furthermore (the Pettenkofer test giving negative results for bile products in every case), none of the samples is entitled to be called a cod-liver product, for no appreciable amount of cod-liver extractive is present in any sample. We are thus obliged to condemn the use of the names under which most of these preparations are sold."

The review of the analyses of proprietary "compound extracts of sarsaparilla" (which will be more fully discussed later in our Therapeutics Department) furnished a story which would be amusing if it were not of such serious import to an unsuspecting public. Here comes the A.D.S. "vegetable" preparation containing 7.5 grains of potassium iodid to each fluidounce; Callahan's "king of all purifiers," with 4 per cent. more alcohol than claimed, and virtues which would seem to depend on alcohol and potassium iodid; the Rexall Tonic with 22.5 per cent. of alcohol not declared on the label; and Wilson's Compound, which contains more alcohol than beer, is rich in molasses, and is sold with a caution to patients against the use, even in small quantities, of beer and alcoholic stimulants, as "calculated to produce the very diseases they wish to cure."

The propaganda is winning its way. With the unremitting zeal of such stations as that of Connecticut, whose chemical laboratories have furnished Winton's valuable exposure of the gluten flour frauds and Street's investigation of American meat extracts, honest commercial progress is bound to ensue.

1. Sixteenth Report on Food Products and Fourth Report on Drug Products, Conn. Agric. Exper. Sta., 1911, Part II.
2. The Journal A. M. A., Oct. 13, 1906, p. 1207.

A NEW ARSENICAL DANGER

Several years ago the occurrence in England of a noteworthy epidemic of peripheral neuritis attributable to the consumption of beer produced in certain establishments led to the interesting association of this pathologic phenomenon with the unintentional introduction of arsenic into the fermented beverage. This toxic element was traced to the raw materials employed in the manufacture of glucose which was used as an adjuvant in the brewery processes, the arsenic starting as a contamination of the acid used to hydrolyze starch in the production of glucose from it. The unfortunate experience served to emphasize the necessity of a careful control of all crude materials used in the preparation of foods and drinks intended for human or even animal consumption; and it likewise indicated the ever-present danger of toxic agencies which may lurk unsuspected in sophisticated products. In many cases, we believe, these possibilities are being carefully and conscientiously guarded against.

Arsenic is a probable contamination of certain anilin dyes the manufacture of which entirely free from the element requires great technical skill and constant care. For certain purposes the presence of arsenic is unobjectionable; but if perchance the coloring substance is introduced into food products it should obviously be beyond criticism in respect to its purity and non-toxicity. There has been marked improvement, we believe, in the direction of eliminating questionable food colors.

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No sooner has a source of danger been disposed of or successfully combated than some other unsuspected menace looms up on the horizon. This time we refer to the arsenic content of shellac and the contamination of foods from this source. Shellac is used as a coating for certain food products such as some kinds of cheap confectionery and bakers' goods and also as a varnish on receptacles and containers of various kinds in many lines of food manufacture. In the brewing industry, for example, the products are often kept in shellac-lined containers from the time they leave the brew kettle until they are dispensed. According to information from the Bureau of Chemistry,[1] orpiment, the yellow sulphid of arsenic, is very generally added to shellac in India for the purpose of rendering the product opaque and at the same time producing the light straw-color characteristic of the higher grades. Examination of a large number of samples of shellac showed that all contained arsenic. The manufacturer may thus unwittingly introduce this poison into the processes which he employs in food manipulation. Many beer-tanks and casks, for instance, are commonly shellacked; and while, as the government chemist remarks, "the amount of arsenic imparted to the fermented beverages from this source is undoubtedly small, this easily avoidable trace is added to any that may be present from the materials of the brew, and it should be remembered that arsenic is a cumulative poison and that the beer-drinker consumes liberal quantities at not infrequent intervals." The addition of orpiment to shellac appears to be wholly unjustifiable, working both deception and danger. The timely warning is welcome; shellac can in some cases be dispensed with entirely and in others replaced by other unobjectionable substances possessing comparable physical properties.

THE CONSERVATION OF CHOLESTEROL IN THE ORGANISM

Physiologic chemists have in recent years devoted much attention to the wide-spread distribution of the so-called lipoids in living cells and tissues. The constant occurrence of these heterogeneous compounds in practically every type of active organism bespeaks some important rôle for them in the economy. The immunologist has begun to relate them to the interaction of the various "immune bodies"; the chemist associates them as possible co-ferments with enzyme reactions; the pathologist finds cholesterol as the conspicuous component of the troublesome gall-stone; the physiologist is inclined to attribute to lecithins and cholesterol some regulative influence on the selective permeability of cell membranes and hemolysis. Everywhere there is a tendency to exploit the lipoids scientifically; yet the problem of their origin and destiny is practically unsolved.

1. Smith, P. H.: The Arsenic Content of Shellac and the Contamination of Foods from This Source, Circular 91, U. S. Dept. Agric., Bureau of Chemistry, Washington, 1912.

The studies of Gardner and others[1] at the University of London have made it appear likely in regard to cholesterol that it is not commonly formed in abundance in the animal organism. When given with food it may be absorbed and find its way into the blood-stream, so that an increase of both free cholesterol and cholesterol esters takes place in the blood. Ellis and Gardner[2] some time ago put forth the working hypothesis that cholesterol is a constituent constantly present in all cells, and when these cells are broken down in the life processes the cholesterol is not excreted as a waste product, but is utilized in the formation of new cells. A function of the liver is to break down dead cells, e. g., blood corpuscles, and eliminate their cholesterol in the bile. After this secretion has been poured into the intestine in the processes of digestion, the cholesterol is reabsorbed along with the bile-salts and carried in the blood-stream to the various centers and tissues for reincorporation into the constitution of new cells. Evidence in support of this view has lately been obtained by a study of the cholesterol content of the various organs and tissues of the body in the case of animals fed on diets containing varying amounts of cholesterol or kept in a state of inanition.[3]

The apparent conservation of a substance once looked on solely as an excretory product will surely elicit further investigation. Incidentally we may remark that the bile, with which cholesterol has long been associated, can no longer be regarded as a mere waste product. Twenty years ago a text-book contained the statement that "one of the most remarkable facts concerning the bile is its apparently small importance." This cannot be said now.

NATIONAL MENTAL HYGIENE

It is asserted that the number of insane persons in proportion to the population is rapidly increasing, particularly in some of the older and more populous states. This may be, and probably is, true, but we do not know positively. Until recent years no reliable statistics were available as to the exact number of insane persons in any state. Through the development of humanitarian methods of placing insane persons in institutions for care and treatment, the number of these patients has apparently increased largely. Formerly, on account of lack of hospital facilities and for other reasons, many were cared for at home who are now cared for in institutions. In any event, the number of insane in proportion to the population is appalling, and the question has become one of the important ones to be dealt with.

The National Committee on Mental Hygiene was formed for the purpose of studying the causes of

1. See various papers in the Proceedings of the Royal Society of London, B. 1908, and subsequently.
2. The Origin and Destiny of Cholesterol in the Organism, Proc. Roy. Soc. London, B., 1908, lxxxi, 110.
3. Ellis and Gardner: The Cholesterol Content of the Liver of Rabbits Under Various Diets and During Inanition, Proc. Roy. Soc. London, B., 1912, lxxxiv, 461.

insanity, and to take stock of the nation's facilities for the commitment and care of the insane; to study carefully the needs of the insane, both before commitment and afterward, and at close range; to determine, if possible, how far local conditions must affect standards of care; to examine and compare different methods of care and treatment and to encourage the formation of other societies having similar aims. One important object is to provide a standard for methods of treatment such as obtains in the treatment of tuberculous patients, which is practically the same in all sanatoriums and resorts where tuberculous patients are received. Collection of information on this subject and standardization of methods will save much effort and will improve the care of these patients.

In some states the insane are confined in jails after trial by jury. Indifference on the part of the public and defective methods of commitment permit large numbers of insane to remain in their homes until perhaps they commit some act of violence, and then, depending on the sentiment of the community, they may be treated either as criminals, or as sick people to be cared for in a hospital. Correct and uniform methods of handling and care of these patients are needed. Plans are often given a trial in one state without ascertaining whether they have failed in another. Methods of great value are in successful operation in some hospitals and are unknown in others. A careful study of this question in all its relations, as proposed by the National Committee on Mental Hygiene, constitutes a movement of great importance and one that should be encouraged and assisted. As stated in our news columns, a large fund is to be raised for carrying on this work and already an anonymous donor has given a large sum toward it.

ANNUAL REPORT OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

The government printing office has issued the report of the Surgeon-General of the Public Health and Marine-Hospital Service for the fiscal year 1911.[1] As the service constitutes the sole national agency operating to combat epidemic disease and to promote public hygiene and sanitation, the report presents much of interest to the physician, no matter to what branch of medicine his activity may be devoted.

Reviewing the scientific work of the service, mention is made of the work done at the Hygienic Laboratory in the investigation of hookworm disease, infantile paralysis, amebic dysentery and typhoid fever. One of the most notable scientific achievements of the laboratory was the transmission of measles from human beings to monkeys for the first time, opening the way for a determination of the infective agent, as well as of a preventive and cure for the disease.

Experimental work has also been conducted on the growth of animal tissues outside the body; the longevity of typhoid bacilli on vegetables; the rôle of oysters in the propagation of typhoid; the influence of poisonous gases on health, and the disposal of night-soil. Study of this last subject has resulted in the devising of a sanitary privy, especially suitable for isolated houses and rural communities, in which septic action is utilized to destroy fecal matter. Studies in embalming have resulted in the composition of an embalming fluid with a new method for its use by which bodies are not only sterilized, but also preserved under extreme conditions of tropical temperature.

Officers of the Hygienic Laboratory have assisted the Bureau of Chemistry of the Agricultural Department in investigating certain food products and in giving testimony in trials under the Food and Drugs Act. Also nearly a hundred proprietary medicines were examined as to strength, composition and action. Other related studies have been made on the pharmacology of drugs and their standardization. Antirabic treatment was successfully administered to 128 persons, and 777 treatments were sent to the health officers of fourteen states.

Field investigations were also conducted, officers being detailed at the request of various state authorities to investigate epidemics of typhoid, infantile paralysis, cerebrospinal meningitis, Rocky Mountain tick fever, and to make a sanitary survey of the towns bordering on Lake Erie and the Niagara River. This work is being extended to include the Great Lakes, particularly with reference to typhoid contamination, but also in respect to the prevention of sewage pollution of the lakes and to secure pure water for those cities whose water-supply is drawn from them.

Pellagra has been a subject for study, not alone in the laboratory, but also in the Marine Hospital at Savannah, Ga., where patients having this disease are admitted for observation. Similar work on hookworm and other intestinal parasites is carried out in the Marine Hospital at Wilmington, N. C. Two officers from the laboratory have been detailed with the mine rescue car of the Bureau of Mines to study hookworm disease among miners of southern states and lung diseases among Colorado miners and to report on the general sanitation and hygiene of mines.

The usual supervising inspection and licensing of viruses, serums and toxins has been maintained.

The Federal Plague Laboratory at San Francisco has continued its work of examining rodents for plague infection, and a plague-like disease has been discovered among rats. Other subjects studied here were the penetrating power of disinfecting gases used on ships, rat leprosy and the rôle of fleas in plague transmission. At the Leprosy Investigation Station, Hawaii, the successful cultivation of lepra bacilli on artificial mediums has been accomplished, and monkeys have been inoculated with human leprosy, both being important forward steps in the knowledge of this disease.

At the forty-four service quarantine stations in the United States over 8,000 vessels were inspected and 420

1. Treasury Department Document 2635.

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were disinfected. The usual quarantine stations have also been maintained at eight points each in Hawaii, the Philippines and Porto Rico. The service cooperated with the New York quarantine officers in the measures which so successfully excluded cholera from that port last summer. Over a million immigrants were examined during the year by the service officers and 27,000 were certified for physical or mental disability.[2]

The service operates twenty-three marine hospitals and 120 other relief stations throughout the country for the benefit of sailors of the American merchant marine. In these, 52,209 patients were treated, of whom 15,444 received hospital care. At the tuberculosis sanatorium at Fort Stanton, N. Mex., 322 patients were cared for during the year. Physical examinations were also made of 4,610 persons connected with the Revenue Cutter, Life Saving, Steamboat Inspection, Immigration and Light House Services.

Among the objects for which the Surgeon-General requests special appropriations are the study of pellagra, an enlarged epidemic fund, and a new building for the Hygienic Laboratory. He also invites particular attention to the "personnel bill," designed to make the pay of Marine-Hospital Service officers equal to that of the Army and Navy Medical Corps. This bill has been passed by the Senate, and reported favorably and unchanged to the House by the Committee on Interstate and Foreign Commerce. It is now No. 64 on the union calendar and every argument strongly favors its passage. As stated in the report of the Senate Committee on Public Health and National Quarantine,[3] when the bill now before the House was reported to the Senate, "in the opinion of the committee, there exists no such difference in the character of the duties performed and responsibilities assumed, the hazards to which the officers are exposed, or the professional and scientific attainments required in the several services, as to warrant the existing disparity in compensation." It will be a misfortune to the medical profession, as well as to the country at large, if partisan influences are allowed to defeat the passage of this bill in the House.

Current Comment

PROGRESS OF WORKMEN'S COMPENSATION LEGISLATION

Notwithstanding the apparent set-back given to the promotion of employers' liability and workmen's compensation laws by the decision of the highest court of New York, such legislation is making considerable progress in the other states. The decision of the Supreme Court of the United States, which was contrary to that of the New York court, has left the other states open for legislation on this subject. In New York, however, it would seem that it will require an amendment to the constitution to permit the enactment of legislation of this character. At present California, Illinois, Kansas, Maryland, Nevada, New Hampshire, New Jersey and Wisconsin have compensation laws protecting workingmen in the industries. Washington, Ohio and Massachusetts have state insurance laws, which cover the matter of injuries to workingmen, but in another way. The governor of Michigan has recently called an extra session of the legislature for the purpose of considering a new primary law and an employers' liability and workmen's compensation act. The attitude of progressive, thinking public officials and other public-spirited individuals is expressed by the governor in his message calling the legislature together when he says that the arguments for the proposed law are irrefutable and that it means a juster, wiser and happier distribution of the hazard of industrial employment, with a saving to employers, employees and courts, and the avoidance of the bitter enmities of suits at law.

THE "BLUE SKY" LAW AND MEDICAL FRAUDS

According to estimates by credit-rating concerns and the postoffice authorities, the people of the United States lose more than one hundred million dollars a year through fake and wildcat securities. Kansas is the only state, so far as we know, that has attempted to protect its people against this class of swindling. That state has a law which is popularly known as the "blue sky" law. It is estimated to save Kansas investors two million dollars a year. But it simply covers one line of business, that of stock-selling in its broad sense; it does not cover the multitude of other fake schemes such as those of the swindling "patent" medicine fakers. It protects only people who have money to invest and who might be considered well-to-do or even rich. Commendable as it is, it does not protect the people who need protection most — those who are sick, or think they are sick, and who are more likely to be influenced by misrepresentation than any other class of people. The admirable Kansas law should be extended to protect people from the most vicious form of swindling. If the people of the United States are swindled out of a hundred million dollars annually by stock jobbers and similar concerns, it would not be a reckless statement to make that they are swindled out of twice that sum by those who prey on the sick — the "patent-medicine" swindlers and quacks, especially if the mail-order fakes are included. Should the people not be protected also against this more damnable and dangerous form of swindling?

A NEW DANGER IN MILK?

A recent announcement from the Bureau of Animal Industry in the Department of Agriculture at Washington brings information not only of great interest to the live stock industry, but also of possible moment to the public health. It is generally recognized that the etiologic factor in the contagious abortion of cattle is the *Bacillus abortus*, which has now been found to occur with a high degree of frequency in market milk.[1] Through investigations of Drs. Mohler and Traum

2. Medical Aspects of Immigration, THE JOURNAL A. M. A., Dec. 30, 1911, p. 2142.
3. Senate Report 61, Sixty-Second Congress, First Session.

1. Circular 198, Bureau of Animal Industry, U. S. Dept. Agric., March 2, 1912.

and of Drs. Schroeder and Cotton of the government service it has been ascertained that the bacillus isolated from milk and the bacillus of contagious abortion produce similar lesions in guinea-pigs; and the identity of the organisms has further been established by the complement-fixation test. Although nothing is at present known regarding the action of this newly recognized milk bacillus on human beings, the possibility of danger from it is at once suggested, especially in view of the progressive lesions of serious character produced by the organism in experimental animals. Attention has lately been directed to the situation by others also.[2] Dr. Melvin of the Bureau of Animal Industry states that the organism was found in eight samples of market milk among seventy-seven samples tested, and in milk distributed by six among thirty-one dairies (over 19 per cent.). There is a suggestion of ominous import in these facts which cannot be ignored even in the absence of positive knowledge. The departmental circular has uttered the warning: the bacillus is another of the long series of facts that unmistakably indicate the proper pasteurization of all milk before it is used as food, as a measure essentially necessary for the protection of public health. And, lest we forget, let it be said as a reminder that we owe this hint in common with untold others, to the beneficent warnings of animal experimentation.

2. Smith, Theobald, and Fabyan, Marshall: Centralbl. f. Bakteriol., lxi, No. 7.

Medical News

COLORADO

New Tuberculosis Colony.—A tuberculosis colony is to be built a mile west of Glenwood Springs by Bud Carberry, formerly of Denver. The colony is to be known as "Cottage Homes Colony." The site covers nine acres and 40 three- and four-room cottages are to be erected as rapidly as possible.

Personal.—Dr. G. Walker Holden, superintendent of the Agnes Memorial Sanatorium, Montclair, and Dr. Gerald B. Webb, Colorado Springs, will represent the American Association for Control of Tuberculosis at the international congress, to be held in Rome next month.——Dr. A. S. Wilson, Pueblo, fell on the ice while acting as camp physician at Cokedale and fractured his left leg.——Dr. S. M. Oppenheim, Denver, is suffering from appendicitis.——Dr. F. W. Kenney has been elected president and Dr. J. C. Hutchinson, secretary of the staff of Mercy Hospital, Denver.——Dr. Robinson Bosworth of the Agnes Memorial Sanatorium, Montclair, has been elected assistant superintendent of the Arkansas Tuberculosis Sanatorium, Booneville.

DISTRICT OF COLUMBIA

Personal.—Dr. Henry W. Jaeger, Washington, resident physician at Casualty Hospital, has resigned to become a member of the staff of the German Hospital, Brooklyn, N. Y., and Dr. C. C. Craft has been appointed his successor.

Veteran Medical Association Dinner.—At the annual dinner of the Veteran Medical Association of George Washington University, February 26, forty-eight members were present. Dr. James W. Norris was chairman of the committee of arrangements.

Need Money for Congress.—Dr. J. W. Schereschewsky, U. S. P. H. and M.-H. Service, and Dr. John S. Fulton, Baltimore, appeared before a joint committee of the board of trade and chamber of commerce of Washington and outlined plans for the entertainment of the International Congress on Hygiene and Demography and the American Public Health Association, which meet in Washington in September, and asked the associations to raise about $10,000 for this purpose.

Public Instruction in Medical Matters.—The Medical Society of the District of Columbia has provided for a permanent committee on public instruction in medical matters, of which Dr. Tom A. Williams is chairman, and Dr. Elnora C. Folkmar, secretary. This committee is conducting two lines of work: the providing of illustrated lectures at the auditorium of the public library, and the publishing of medical articles in the Sunday issues of three of the daily papers. Thus far four public lectures have been given by men in the Bureau of Chemistry and the Hygienic Laboratory of the Deptrtments of Agriculture and of the Interior. The public lecture work and the publishing of medical articles was begun by the Woman's Clinic in November last. The Woman's Clinic is still conducting the public health lectures for the normal schools, the parents' associations and other particular organizations. More than fifty such lectures have been given to audiences aggregating over 4,000 persons. The lectures given by the medical society are for the general public and are given by men not engaged in practice in Washington. Those given by the Woman's Clinic are by the physicians of Washington. Ten signed articles on matters of public health were published in the *Washington Post* by the Woman's Clinic. They have since been published under the heading "Contributed by the Medical Society of the District of Columbia," edited by Dr. William J. Mallory, a member of the committee. The Woman's Clinic in cooperation with the district chapter of the Red Cross is conducting classes in "First Aid in Emergencies." Persons attending eight or more of these lectures are eligible for examination leading to a certificate of the American Red Cross. The educational department of the Woman's Clinic is conducted by a committee of which Dr. D. S. Lamb is chairman, and Dr. Elnora C. Folkmar is secertary and executive officer. All this public health educational work of the District of Columbia is an expression of the work outlined by the committee on public health education among women of the American Medical Association, of which Dr. Eleanor S. Everhard of Dayton, O., is chairman.

ILLINOIS

Sanatorium to Be Built.—The contract has been let for the construction of the Dr. Katherine E. James Sanitarium at Corey's Bluff, Rockford. The new building will accommodate thirty patients and will represent an investment of more than $15,000.

State Society Meeting.—The sixty-second annual meeting of the Illinois State Medical Society will be held in Springfield, May 21 to 23. The Leland Hotel will be general headquarters. The Leland banquet hall and the Y. M. C. A. gymnasium will be used as section meeting places and in the latter the general sessions will be held. A theater party is planned for Wednesday afternoon for the visiting women, followed by a musicale at the Leland.

Personal.—Dr. Anna Weld leaves Rockford for Europe, May 16.——Dr. Louis Van Patten, St. Charles, was thrown from a carriage in a runaway accident at Elgin, March 18, and sustained severe lacerations and bruises.——Dr. Frank E. Baldwin, Peoria, who has been ill, has recovered and resumed practice.——Dr. Russell Broughton, Rockford, is reported to be seriously ill with pneumonia.——Dr. Fenton B. Turck, Chicago, who is traveling in Europe, is reported as having left England and as now being in Spain.

Chicago

Hospital Cornerstone Laid.—The cornerstone of the new German Hospital, Grant Place and Hamilton Court, was laid with impressive ceremonies, March 24, by Count J. H. von Bernstorff, ambassador of Germany to the United States.

Medical Certificate Necessary for Marriage.—Rev. W. T. Sumner, dean of the Episcopal Cathedral of SS. Peter and Paul, and chairman of the Chicago Vice Commission, in a sermon March 24, announced that "beginning with next Easter, April 7, no persons will be married at the cathedral without first presenting physician's certificates as to their normal soundness of mind and stating that they have no incurable or communicable disease."

Meetings on Social Hygiene.—The Chicago Medical Society and the Society of Social Hygiene will hold joint meetings, April 3 and 4. On the first day will be held a symposium on social evil, with introductory remarks by Dr. J. M. Patton, president of the Chicago Medical Society, and papers on "The Great Need of Education on Matters of Sex," by Dr. Rachelle Yarros; "Some Observations of the Vice Commission," by Dean Sumner; "Economic Phases of the Venereal Diseases,"

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by Dr. William L. Baum; and "The Attitude of the Municipality Toward Sexual Vice," by J. L. Hamery, commissioner of public safety, Des Moines, Ia. At this meeting Professor C. R. Henderson will preside. On the evening of April 4, Dr. J. M. Patton will be in the chair and a symposium will be held on social service, with introductory remarks by Professor Henderson and papers by Dr. Henry B. Favill on the "Rôle of the Physician in Social Service"; by Dr. William T. Belfield, on "The Procreation of the Feeble-Minded"; by Dr. John N. Hurty, Indianapolis, secretary of the Indiana State Board of Health, on "Requirements for a Marriage License"; and by Clara P. Seipel, president of the Frances Juvenile Home, on "Venereal Diseases in Children."

INDIANA

New Officers.—Society of Physicians of Linton: president, Dr. M. N. Thayer; secretary, Dr. E. R. Cravens.

Leper is Dead.—The only leper in Indianapolis, an old colored woman, who has been under quarantine for several weeks, died March 18. Her case was described by Dr. Brayton in THE JOURNAL, March 9, 1912, p. 690.

Hospitals Merged.—The Ward Sanatorium and the Sisters of Charity Hospital, Indianapolis, have been merged and will be under the control of Dr. Joseph H. Ward.

Child's Welfare Exhibit.—The City Board of Health, in conjunction with the Children's Aid Association of Indianapolis, expects to hold a child's welfare exhibit April 1-6.

Laboratory for South Bend.—Drs. Roscoe L. Sensenich, R. C. Shanklin, C. C. Terry, Hugh M. Miller and W. H. Baker have incorporated the South Bend Medical Laboratory, with a capital stock of $3,000.

Plans for New Hospital Approved.—In the competitive contest for designs for the new hospital for Indianapolis to cost $1,000,000, the plans of Mr. Adolph Scherer were accepted. At the present time $330,000 are available for the building. The board of health has decided to erect a nurses' home, with accommodation for one hundred nurses.

New Hospital Wing Soon to Be Completed.—The new wing of the Methodist Episcopal Hospital, Indianapolis, will, it is reported, be completed May 1, and will cost $150,000. One floor of the wing is to be devoted to the care of children, and one to obstetrics. There will be an emergency ward and also a roof garden for convalescent patients.

Tuberculosis Statistics.—The State Board of Health has compiled statistics of tuberculosis for ten years, which show that Crawford County, on the Ohio River, has an annual death-rate of 272.4 per 100,000 from the disease, and that Benton County, in the northern part of the state, has the lowest annual rate, namely, 71.8 per 100,000. Farmers show a higher mortality rate from tuberculosis than individuals in any other occupation.

Personal.—Dr. Severance Burrage has resigned as professor of sanitary science in Purdue University, Lafayette, and will spend several months in Europe, after which he will take charge of the biologic and serum department for an Indianapolis drug house.——Dr. Gustave A. Petersdorf, Indianapolis, was thrown out of his buggy and badly bruised in a runaway accident recently.——Dr. J. C. Watson, Tolleston, was struck by an automobile, March 15, and sustained severe bruises.——Dr. James A. Work, Elkhart, slipped and fell on the ice, March 13, suffering an impacted fracture of the upper end of the humerus, with a dislocation of the shoulder.——Dr. Robert Harris, South Bend, celebrated his eighty-ninth birthday anniversary, March 14.——Dr. W. J. Hurt, Waynetown, has been under treatment in the Deaconess Hospital in Indianapolis for septicemia, due to an operation wound.——Dr. Carleton B. McCulloch, Indianapolis, sailed for Europe, March 23.

MARYLAND

Vital Statistics Bill Returned to Committee.—By a vote of 49 to 43, the house refused, on March 13, to adopt a favorable report of the judiciary committee, of the State Board of Health bill, requiring the state-wide registration of births and deaths, and instead referred the bill to the ways and means committee.

Baltimore

Medical Students' Society Organized.—The Charles W. Mitchell Medical Society, named in honor of the professor of the practice of medicine in the University of Maryland, was organized by the students of that institution, March 13.

Epidemic of Septic Sore Throat.—A very serious form of sore throat, said to be due to streptococcus infection, is prevalent in Baltimore. Many cases have been reported, with a number of deaths. It is believed to be due to infection from milk and the boiling of all milk is advised.

Medical Museum Favored.—Dr. William H. Welch, in an address before the Baltimore City Medical Society, spoke of the advantages to be derived from having a permanent medical museum, where pathologic specimens could be exhibited and studied. A committee was appointed, with Dr. W. R. Stokes as chairman, to devise plans for such a museum, to be submitted at a subsequent meeting.

Personal.—Dr. Samuel Amberg, of the Department of Pediatrics at Johns Hopkins Medical School, has been appointed a member of the research staff of the Otho S. A. Sprague Memorial Institute, Chicago.——Dr. Bernard E. Browne is said to be suffering from septicemia, due to an operation wound.——Dr. Compton Reily has been appointed orthopedic surgeon at the Church Home and Infirmary.——Dr. Joseph Blum has retired from practice and will reside in New York City.——Dr. Hiram Woods was the guest of honor at a dinner of the Nu Sigma Nu Fraternity of the University of Maryland, March 15. Dr. John C. Hemmeter was toastmaster.——Dr George W. Dobbin was operated on for appendicitis, March 15, and is reported to be doing well.——Dr. C. E. Downes, health warden, is reported to be ill with septicemia, due to operation wound.

MASSACHUSETTS

Active Campaign for Hospital.—A nine days' campaign to add $53,000 to the $47,000 now on hand and thus complete the $100,000 building fund for the Melrose Hospital, began March 20.

Consulting Staff Resigns.—The consulting staff of physicians of the Municipal Hospital for Tuberculosis, Lawrence, has resigned, to take effect coincidently with the acceptance of the resignations of the board of trustees of the hospital.

Strength of Antivaccination Influence.—A bill to appoint a commission to investigate the value of vaccination was refused consideration by the senate, by a vote of only 32 to 29, a fact significant of the strength of the antivaccination influence in the state.

District Society to Meet.—The Essex North District Medical Society has accepted the invitation of the management and staff of the Lawrence General Hospital to hold its annual meeting at the hospital, May 8. The members will be afforded an opportunity to inspect the hospital and to see such medical and surgical clinics as can be provided.

Cutter Lecture.—The first of the annual series of lectures given under the Cutter bequest at Harvard Medical School, March 13, by Dr. William H. Park, Director of Research Laboratories of the Department of Health of New York City, on "Observations on Dosage and Methods of Injecting Antitoxin in the Treatment and Prevention of Diphtheria and Tetanus."

Hospital to Move.—St. Elizabeth Hospital, East Brookline Street, Boston, is to be transferred to Brighton. The selected site is on a hill side, at the corner of Cambridge and Washington Streets. The building will be of modern construction, with a main central building and two wings; fire-proof, with floors of concrete and roof of tile. Each wing will accommodate fifty patients, while the central building, after housing the administrative officers, will also have fifty beds.

Personal.—Drs. Edward H. Bradford, professor of orthopedic surgery, and James Jackson Putnam, professor of diseases of the nervous system in Harvard Medical School, have retired from active service and will be made professors emeritus.——The Lawrence Board of Health has appointed Dr. Harry H. Nevers acting city bacteriologist; Dr. William J. Sullivan, assistant city physician, and Drs. John H. Bannon and Myer Schwartz, third and fourth city physicians, respectively.

Change in Form of Examination.—The report of President Lowell of Harvard University just issued speaks of a new departure in the process of examination for the medical degree. Two examinations are proposed, partly practical, partly oral and partly written and designed to measure the scope of the students' comprehension, judgment and skill, rather than to test his detailed information. The first examination covers the laboratory subject in the first year and a half and the second covers the clinical courses taken later. Examinations in special courses will be of importance only as qualifying the students to take these general examinations.

MICHIGAN

Honor Dr. Hochstein.—The Kalamazoo Academy of Medicine held a banquet, March 26, in honor of Dr. Adolph Hochstein, who has been a faitful attendant and worker in the academy

ever since its organization. Dr. W. A. Stone was chairman of the committee in charge.

Personal.—Dr. Lydia M. DeWitt, Ann Arbor, formerly of the department of anatomy in the University of Michigan, Ann Arbor, and more recently an official of the health department of St. Louis, has been appointed a member of the research staff of the Otho S. A. Sprague Memorial Institute, Chicago.——Dr. Harry B. Britton, Ypsilanti, was operated on in Ann Arbor for appendicitis, March 10.——Dr. C. A. Leonard, Sherwood, had his shoulder dislocated in a runaway accident, March 6.——Dr. George M. Kline, superintendent of the psychopathic ward of the University of Michigan, has accepted the superintendency of the Massachusetts State Hospital for the Insane, Danvers.

MINNESOTA

Staff for Aid Society.—The Charitable Aid Society of Minneapolis has retained the services of five physicians as a staff, which will be on call from March 15 to June 15.

Personal.—Dr. L. O. Clement, Lamberton, sailed for Europe, March 6.——Dr. O. T. Batcheller, Brainerd, who goes east to do postgraduate work before locating in the west, was given a dinner by the physicians of Brainerd, March 2.——Dr. W. M. Sweney, Red Wing, fell on an icy walk, March 1, and sprained his wrist.

Typhoid Situation at Two Harbors.—Up to March 11, 150 cases of typhoid have been reported at Two Harbors, the majority of which are not severe.——The Duluth and Iron Range Railroad Company, in order to safeguard the health of its employees, is endeavoring to educate them regarding the precautions to be taken when typhoid is present and how to avoid infection.

Leprosy.—In the case of the Brodeen children at Cove, Mille Lacs County, who are excluded from school because their brother is a leper, notwithstanding the fact that he is isolated from them, the assistant attorney-general has given an opinion to the effect that a parent of children excluded from school because another member of the family has leprosy, has no recourse except by bringing suit against the members of the school board.

MISSOURI

Hospital Closed.—The Samaritan Hospital, Kansas City, is said to have been closed by the Kansas City Board of Health, February 28, as the result of information of nurses who testified at an inquest on the previous day that many criminal operations on women had been performed there.

Personal.—Dr. I. H. Miller has been appointed city physician of Louisiana.——Dr. H. J. Ruyle, Springfield, is convalescent at St. John's Hospital, after a serious illness.——Dr. G. W. Petty, Nevada, slipped and fell on the ice, March 8, fracturing his right femur.——Dr. George J. Musgrave, Clarence, is reported to be seriously ill.

Endowment Needed for Hospital.—The Mercy Club, Kansas City, whose object is to secure an income of $20,000 for Mercy Hospital, has appointed a committee of two hundred, each member of which is expected to obtain ten memberships to the club. The financial condition of the hospital is said to be such that it must close if help is not immediately forthcoming.

St. Louis

Board of Health Moves.—The board of health moved March 12 into its new quarters in the municipal courts building.

Reserve Corps Banquet.—The St. Louis members of the Medical Reserve Corps, U. S. Army, held their first annual banquet, March 18. Lieutenant W. G. Kirchner, vice-president, acted as toastmaster.

NEW YORK

New Officers.—Utica Medical Club, March 14: president, Dr. R. L. Baker; secretary-treasurer, Dr. J. E. Gage.

Personal.—Dr. C. J. Patterson, Yonkers, has succeeded Dr. Hiram Elliott as superintendent of the Marshall Sanitarium, Troy.——Dr. W. M. Wells, Fulton, is reported to be seriously ill, as a result of a fall six weeks ago.——Dr. Austin T. Fink, Freedom Plains, is reported to be seriously ill with pneumonia.——Dr. Frederick Peterson, New York City, has been appointed a trustee of the Craig Colony for Epileptics.——Dr. Charles Stover, Amsterdam, has been named as manager of the Tuberculosis Hospital, Ray Brook.

Chiropodists Urge Reforms.—The Pedic Society of New York is trying to have a bill enacted requiring that every candidate seeking a chiropodist's license must have an academic education satisfactory to the Board of Regents, who are to take over the examining power from the Board of Examiners of the Pedic Society. The bill further requires that in the future candidates must attend at least one full course of lectures on chiropody and maintain a standard acceptable to the Board of Regents, and that the examination of candidates must be placed in the hands of the State Board of Medical Examiners.

State Society Meeting.—The one hundred and sixth annual meeting of the Medical Society of the State of New York will be held in Albany, April 16-18. The scientific work will be divided into five sections: Section on Medicine, Dr. Henry L. Elsner, chairman, Syracuse, Dr. Harold Barclay, secretary, New York City; Section on Surgery: Dr. Parker Syms, chairman, New York City, Dr. James N. Vander Veer, secretary, Albany; Section on Diseases of the Eye, Ear, Nose and Throat: Dr. Edward Bradford Dench, chairman, New York City, Dr. James Francis McCaw, secretary, Watertown; Section on Mental and Nervous Diseases, Eugenics and Medical Expert Testimony: Dr. Albert Warren Ferris, chairman, Watkins, Dr. Edward L. Hanes, secretary, Rochester; Section on Public Health and Preventive Medicine: Dr. Joshua M. Van Cott, chairman, Brooklyn, Dr. Allen Arthur Jones, secretary, Buffalo. This list of names means that the society has secured for each section men who are eminent in the line of work over which they preside. In working up the program many men prominent throughout the country in addition to the members of the state society will contribute papers. In the Section on Medicine the following out-of-town guests will read papers: Drs. William F. Braasch, Rochester, Minn.; Alfred Stengel, Philadelphia; Solomon Solis Cohen, Philadelphia; Edward C. Rosenow, Chicago, and William C. MacCarty, Rochester, Minn. In that of surgery: Surgeon-Generals George H. Torney, U. S. Army, and Charles F. Stokes, U. S. Navy, and Drs. Emil G. Beck, Chicago, and John B. Deaver, Philadelphia. In the Section on Diseases of the Eye, Ear, Nose and Throat, Dr. Truman W. Brophy, Chicago. In the Section on Mental and Nervous Diseases, Eugenics and Medical Expert Testimony, Charles B. Davenport, Ph.D., secretary American Breeders' Association, Cold Spring Harbor, L. I.; William A. Purrington, New York City; Hon. Randall J. Le Boeuf, Albany, former justice of the Supreme Court of New York; and in the Section on Public Health and Preventive Medicine: Hon. Robert W. Hebberd, secretary, State Board of Charities, Theodore Horton, C.E., chief sanitary engineer. The Public Health Section will be open to the public and the intention is to create interest in the various subjects which are to be discussed. With this end in view a number of men who are interested in public health matters and who are not doctors will read papers. The State Board of Health will also open its laboratories to the physicians and there will be an exhibit by Miss Tracy on the "Invalid Occupations." These exhibits will be held in the Sunday school rooms of the Emmanuel Baptist Church.

New York City

Tenth Baby Dies From Poisoning.—The tenth death in the Brooklyn Nursery and Infants' Home occurred March 20. The nurse who is alleged to have administered the poison has been indicted for murder in the first degree.

Reunion.—On April 3 a reunion and banquet of the class of 1892 of the Medical Department of the State of New York will be held at the Hotel Martinique, 56 West Thirty-Third Street. Dr. J. Emmet Tower is chairman of the committee of arrangements, and all members of the class are invited to be present.

The Teaching of Obstetrics.—At a meeting of the Section of Obstetrics and Gynecology of the New York Academy of Medicine to be held April 25, Dr. J. Whitridge Williams, Baltimore, is to read a paper on "What Can Be Done to Improve the Teaching of Obstetrics in this Country." The paper will be followed by a discussion participated in by Drs. William M. Polk, E. B. Cragin, J. C. Edgar, J. W. Markoe and Austin Flint, Jr.

Personal.—Dr. John J. McAllister, consulting surgeon of the New York Central Railroad, is seriously ill with blood-poisoning as the result of a slight cut at the Mount Sinai Hospital. His thumb has been amputated.——Dr. George T. Stewart sailed for Europe on March 15.——Surgeon-General Blue made his first official visit to Ellis Island on March 22 and expressed himself as well pleased with the condition of things there. He announced that he would probably add two doctors and an alienist to the medical staff.

Acute Indigestion as a Cause of Death.—The *Times* in a recent editorial, commenting on the large number of deaths of prominent persons which have occurred recently, and have been

attributed to actue indigestion, arraigns physicians for making slipshod diagnoses under this name, which means no more than the term "heart failure" would under the same conditions. The bureau of the census is also arraigned for having "acute indigestion" mentioned as a cause of death. It says further that the coroner or health officer who accepts a death certificate so worded is culpable, for there exists no demonstrable evidence that acute indigestion, pure and simple, has ever caused death. Autopsies are urged in these cases for both legal and scientific reasons.

Advisory Board Appointed.—Dr. Joseph J. O'Connell, Brooklyn, health officer of the port of New York, has obtained the cooperation of an advisory board consisting of Drs. James Ewing, professor of pathology in Cornell University Medical College; Dr. John H. Larkin, associate professor of pathology in the College of Physicians and Surgeons; Dr. Joshua M. Van Cott, professor of pathology and bacteriology in Long Island College Hospital, and Dr. Francis Carter Wood, head of the department of clinical pathology in the College of Physicians and Surgeons. This advisory board will be in complete control of the bacteriologic and pathologic department of the port, on which the safety of the port against epidemic diseases depends to so large an extent.

New Move in War on Tuberculosis.—The New York Association for the Improvement of the Condition of the Poor has undertaken an experiment to demonstrate if it is possible to wipe out centers of tuberculosis infection in tenement districts of New York. An entire section of the Vanderbilt Tenements, recently built as homes for families having members afflicted with tuberculosis, has been leased for a period of three years and has been converted into a home hospital. Into each of the twenty-four apartments a family, which has become dependent because of tuberculosis in one of its members, has been moved, and for the next three years an effort will be made to determine whether the spread of tuberculosis can be checked and cures effected under medical direction, aided by competent nursing, adequate relief, freedom from worry, fresh air and sunshine. Equal attention will be paid to the social and medical phases of the question and all patients will be forbidden to work before recovery. Where cures are effected, the families will be moved into suitable homes and the supervision continued until the cure has been demonstrated to be permanent. Dr. Linsly R. Williams is chairman of the committee in charge of this work and it is thought that the experiment will be one of national importance.

PENNSYLVANIA

Medical Society Library.—At the March meeting of the Delaware County Medical Society the president appointed Drs. E. W. Bing, H. M. Armitage and Frank Nothnagle a committee to consider the question of the establishment of a medical library.

Personal.—Dr. J. Winfield Good, Spring City, is seriously ill, after an operation for appendicitis, in the Pottstown Hospital.——Dr. W. R. Patterson, Lloydell, while making a professional call, March 12, fell, fracturing his right leg near the ankle.——Dr. C. P. Seip, Pittsburgh, has been appointed a member of the Bureau of Medical Education and Licensure, vice Dr. Gustave A. Mueller, Pittsburgh, deceased.——Drs. F. B. Pringle, Punxsutawney, and S. M. Free, Du Bois, are convalescent after attacks of septicemia.

White Haven Report.—The report of the board of managers of White Haven Sanatorium, shows that the increased cost of living and the increase in the severity of the cases entered, is responsible for a waiting list for the first time in the history of the sanitarium. The average cost for maintaining one patient per diem is $1.31. There are now twenty-five nurses and fourteen visiting physicians at White Haven. Legacies amounting to $26,000 have been received. There were 732 patients cared for, and of these, 500 were discharged cured. Only fifty-nine deaths occurred and 60 per cent. of the admitted cases were persons in the advanced stages of the disease. The hospital purchased 218,855 quarts of milk and 150,564 eggs, besides those produced on the farm.

State Medical Board Plans to Stop Fraud.—In order to determine absolutely the identity of each applicant, the Bureau of Medical Education and Licensure will require every applicant for license to practice medicine in Pennsylvania, to file with his papers two unmounted photographs of himself, one of which must be presented when he appears for his first examination. This provision, together with the system of assigning each a number, will, it is believed, prevent fraud. The first examination under the new bureau will be held in Philadelphia, Pittsburgh and Harrisburg, June 24 to 27, and the first examination of two-year medical students will be determined by the bureau at its meeting on April 1. As under the law all physicians in the state must be registered at the Department of Public Instruction, plans are now being made whereby cards will be issued to all practitioners, so that they may furnish name, address, college and date of graduation by mail without the necessity of going to Harrisburg to comply with the law. The department expects to have every man engaged in the practice of medicine registered within the next year.

Philadelphia

Assistant Medical Inspectors Appointed.—Dr. Joseph S. Neff, director of public health and charities, has made the following appointments as assistant supervising medical inspectors for the public schools: Drs. Albert F. Moxey, Walter W. Roach, J. M. Hincken, Bernard Kohn and Ralph H. Spangler.

Weir Mitchell Lectures.—The fifth of the Weir Mitchell lectures of the College of Physicians was delivered March 29 in Mitchell Hall, by Dr. William H. Howell of Johns Hopkins University, on "The Factors Concerned in the Coagulation of Blood and Their Variations Under Pathologic Conditions."

Hospital News.—Plans are being considered for an addition to the roof garden of the Jefferson Medical College Hospital.——A three-story laboratory building is being planned for the Samaritan Hospital.——The contract has been awarded for a new hospital building for the Woman's Medical College Hospital. The first story and basement of the building have already been erected and this contract is for five additional stories and a roof garden. The building will be a fireproof structure of the most modern hospital type and will cost about $52,000.——A new dispensary under the management of the Philadelphia Beneficial Association, was opened March 19, at 131 Race Street, for the treatment of accident, minor surgical and medical cases in that section. The institution, under the supervision of Dr. Samuel S. Barr, will be non-sectarian and all services will be given free. Special attention will be paid to diseases of the eye, throat, nose and ear. A nurse will be supplied to the recreation pier at the foot of Race Street, during the summer months, to instruct mothers in the care of babies.

GENERAL

Dinner to Chief Surgeon.—The medical officers of the Army stationed in the Department of the East gave a dinner in honor of Colonel and Mrs. John Van Rensselaer Hoff, March 16. Col. Hoff, chief surgeon of the department, is about to retire from active service and will reside in Washington.

Purity Federation.—The World's Purity Federation, an organization which has been working for ten years in an organized effort to eradicate the traffic in women, the annihilation of public vice, and the giving of instruction to the young in sex hygiene, announces that a new campaign will be inaugurated next month, when a number of expert workers will hold conferences in the leading cities in Eastern Canada, the Atlantic coast states and the south. The tour will begin at Toronto, April 9, and will end in Louisville, Ky., early in May.

Gift to the National Committee for Mental Hygiene.—It is announced that a gift of $50,000 has been made by a donor who desires his name withheld for the purpose of furthering the work of the National Committee for Mental Hygiene. The same individual has agreed to give $50,000 more, on condition that the sum of $200,000 additional be secured. The purpose for which the committee was formed is the study of all matters connected with the commitment, care and after-treatment of the insane. Plans for the study of this subject have been carefully prepared, and it is intended to encourage the formation in the various states of allied but independent societies with similar aims to those of the national committee. A special subcommittee, of which Dr. William L. Russell, superintendent of the Bloomingdale Hospital, is chairman, has been formed to begin the work outlined, and an office has been opened in the Germania Life Building, New York City. Dr. Thomas W. Salmon of the United States Public Health and Marine-Hospital Service has been granted leave of absence by the government to undertake this work and has been engaged to conduct the studies outlined by the committee. The newly elected officers are: president, Dr. Llewellys F. Barker of Johns Hopkins University; vice-presidents, Dr. William H. Welch of Johns Hopkins Medical School, Dr. Charles P. Bancroft, superintendent of the New Hampshire State Hospital, Concord, N.H.; treasurer, Otto T. Bannard, president of the New York Trust Company; chairman of the executive committee, Dr. George Blumer, dean of Yale Medical School; chairman of the finance committee, Prof. Russell H. Chittenden, director of Sheffield

Scientific School of Yale University; secretary, Clifford W. Beers, organizer of the National Committee for Mental Hygiene.

Professor Ehrlich Announces a New Salvarsan.—Reference has been made to the fact that Professor Ehrlich has been working on a new salvarsan. It is here referred to as a matter of news, of interest to our readers, but it is to be remembered that the new product is still in an experimental state. Salvarsan itself has not yet subsided into the niche in the list of medicaments that it will probably occupy after it has been thoroughly tested out and the results, both favorable and unfavorable, soberly classified. Dr. B. C. Corbus, Chicago, one of a number of Dr. Ehrlich's co-workers in this country, submits the following statement of Neo-Salvarsan and its method of use: "Neo-Salvarsan is prepared from the old salvarsan by the action of the sulphoxylates. It is an easily water-soluble form of salvarsan and can be readily put in solution with a neutral reaction by simply using water. It must be dissolved in cold, freshly distilled sterile water, or, if this is not possible, in boiled water that has been cooled. This solution should be used at once after being prepared as it rapidly deteriorates on standing. Dissolving the drug in normal saline is forbidden, as it becomes more toxic. It is not necessary to neutralize it with sodium hydroxid because its action is already neutral. The technic is the same as with the old salvarsan. To prepare the dose, 0.15 gm. is dissolved in 20 c.c. of water and 1.5 gm. in 200 c.c. of water. The intermediate doses are given in corresponding amounts of water. The largest dose that has been given to a man is 1.5 gm., which equals 1 gm of the old salvarsan. In women, 1.2 gm. and in children, according to the age, from 0.15 gm. to 0.35 gm. have been given. Professor Schreiber of the Städtischen Krankenhaus Sudenburg in Magdeburg has carried on the preliminary experiments. He has been using the preparation since October, 1911, has treated 269 patients, and considers that the patients stand the new preparation better than the old. Neurorecurrences have not been observed. For the intramuscular injection, 0.9 gm., which corresponds with 0.6 gm. of the old salvarsan, is dissolved in 30 c.c. of water. A little novocain is injected through the same syringe, the needle remaining *in situ*, and after a few minutes the injection is passed deeply into the muscle. Whether the intravenous is superior to the intramuscular injection is not yet settled."

FOREIGN

Deaths in the Profession Abroad.—Besides those mentioned elsewhere, the profession has lost recently: Sir Francis R. Cruise, D.L., M.D., G.S.G., of Dublin, knighted in 1895, honorary physician in Ireland to King Edward VII and King George V, who died at his home in Dublin, February 26, aged 78.——P. M. Giuria, M.D., professor of stomatology at the university of Genoa.——F. Oloriz, M.D., professor of anatomy and embryology at the university of Madrid and author of numerous works on anthropology and anatomy, especially on the cephalic index in Spain and on dactylography.——A. H. Young, emeritus professor of anatomy in the University of Manchester, who died February 22.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 16, 1912.

The Report of the Royal Commission on Vivisection

At the instigation of the small but exceedingly active body of antivivisectionists in this country the government appointed in 1906 a commission, consisting principally of eminent doctors and lawyers, to inquire into and report on the law relating to vivisection and its administration and whether any, and if so, what changes were desirable. More than seventy meetings have been held at which a large number of witnesses have been examined. The commission was freely accessible to all persons who were or fancied themselves to be in a position to criticize the practice of vivisection. All the allegations of the antivivisectionists were brought before the commission. Numerous papers from various official, medical, scientific and other sources, bearing on the subject, were also received. Thus the commissioners were informed of every class of opinion. After so much delay, a report has at last been issued. First place is given to various allegations made from time to time by Mr. Stephen Coleridge, the protagonist of the antivivisectionists. As the outcome of ten years' investigation of the Vivisection Act, he has made twelve charges against its administration, none of which is sustained by the commissioners. Another prominent antivivisectionist spoken of is Miss Lind-af-Hageby, who makes charges of cruelty in a well-known book, "The Shambles of Science." The commissioners say that her assertions are "founded on a misapprehension" and have come to the conclusion that other witnesses have "either misapprehended or inaccurately described the facts of the experiments." So far as the commissioners can judge, they believe that the holders of licenses and certificates for vivisection, with rare exceptions, have endeavored with loyalty and good faith to conform to the provisions of the law. They further state that the harrowing descriptions and illustrations which are freely circulated of operations inflicted on animals, are in many cases calculated to mislead the public, so far as they suggest that the animals are not under an anesthetic. The next twenty-five pages of the report are devoted to the recent history of the progress of medical science in connection with experiments on animals, and to the question whether or not these give valuable results in relation to the prevention and cure of disease. The commissioners point out that in recent years the value of the experimental method has largely been recognized by the public, as well as by various public bodies, as is shown by the foundation of schools of tropical medicine and the appointment of research expeditions to investigate on the spot various tropical diseases, the foundation of an imperial research fund for the purpose of investigating cancer, and the appointment of a royal commission to investigate tuberculosis by experimental methods. Evidence was received from persons eminent in physiologic, pathologic and sanitary science who testified that knowledge had been acquired with regard to the vital functions, the causes of diseases, and the means for their prevention and cure which could not otherwise have been acquired. On the other hand, many witnesses were heard, some of whom were physicians, who contended that this was not true. But the great preponderance of medical and scientific authority was against the opponents of vivisection. This was more markedly so than at the previous Royal Commission on Vivisection which sat in 1875.

THE MORAL QUESTION

On the question of the morality of vivisection several eminent moralists, as well as men of science, were heard. After full consideration, the commissioners are led to the conclusion that experiments on animals, adequately safeguarded by law and faithfully administered, are morally justifiable. As regards the different classes of animals used and the possibility of making discriminations between them, this is declared to be a delicate question of relative ethics. The general sense of civilized mankind would be prepared to make such differentiation and would regard with quite a different degree of reprobation the like treatment of one of the domestic animals and of a cold-blooded or verminous or destructive animal. The higher apes, the dog and the cat present claims for special consideration.

RECOMMENDATIONS

A number of recommendations are made, with which the antivivisectionists express some satisfaction: (1) further limitation with regard to the use of curare, during the use of which it is recommended that an inspector should be present, and should satisfy himself that the animal is in a state of complete anesthesia; (2) stricter provision as to the definition and practice of pithing, which should be performed only by a licensed person and under an adequate anesthetic; (3) additional restrictions regulating the painless destruction of animals which show signs of suffering after experiments; (4) the keeping of special records by experimenters in certain cases; (5) an inspector should have the power to order the painless destruction of any animal after experiment which shows signs of obvious suffering even though the object of the experiment has not been attained. A minority report is made by three of the commissioners, one of whom is Sir William Collins, eminent both in the profession and in public life. They recommend that the administration of an anesthetic shall be obligatory in all experiments likely to cause pain, or, if the nature of the investigation render this impossible, then, on the supervention of real or obvious suffering, the animal shall be forthwith painlessly killed.

Radium in the Waters of Bath

The waters of Bath have been famous for their therapeutic powers for many generations and this has long been a puzzle to physicians and chemists. At last an explanation seems to have been found. Radium was discovered in them in 1903. For long no particular notice was taken of this, but with the progress of radiotherapy, increasing numbers of patients have thronged to this famous city. The city council determined to obtain the highest scientific advice on the subject and requested the eminent scientist, Sir William Ramsay, to investigate it. Before a crowded and distinguished audience, including the city

council and many physicians, he gave his results. He stated that the recorded analyses of the Bath waters showed in the main merely ordinary constituents, most of which were present in many drinking-waters. The only unusual constituents, so far as was indicated by the analysis made at the *Lancet* laboratory, were small quantities of strontium and lithium with a trace of bromin. But the fact that mineral waters all over Europe had for ages been used for curative purposes, combined with present knowledge that such waters while not unusual in "chemical" composition all agreed in yielding helium made it interesting to examine the Bath waters for radium and for niton, the emanation of radium. In twenty-four hours the King's Well gave off 4,927 liters of gas containing in 10,000 parts 360 of carbon dioxid and 9,640 of nitrogen, including 73.63 parts of argon, 23.34 of neon and 2.97 of helium. In the waters of the King's Well there were 0.1387 mg. of radium per million liters. Thus there were 188 times as much neon in the gas from the King's Well as is contained in atmospheric air. In conjunction with Dr. Stevenson, of the medical school of University College, experiments were made, in which mice were fed with bread and cheese soaked in a solution of niton. These showed that niton was thrown off chiefly by the lungs and in three hours. When a patient took a bath the skin might absorb some niton and some undoubtedly entered the lungs, since it was always given off from the surface of the hot water. Skin absorption might be increased in the following way: Niton in disintegrating continuously discharges electrons, or in the older phraseology loses negative electricity and becomes positively charged. Hence it would be attracted by a negatively charged body. If, therefore, the patient in the bath were connected with the negative pole of a battery at a potential of 100 volts or even more, and the other electrode were placed in the water, the niton would probably reach the skin and probably enter the system by so-called ionization. In this way, a considerable dose might be given. Naturally, caution would be required in experimenting on these lines. Another method by which still stronger doses might be administered would be by directing a spray of the gas against the patient's skin or making the patient breathe the spray.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 8, 1912.

The Morbidity in the French Army

About ten years ago a sensation was made in France by a question asked by a senator of the minister of war in regard to the sanitary condition of the French army. It appeared from the debates following that at that time the mortality in the French army was very high, especially by comparison with the great military power, Germany. It seems doubtful whether things have changed since then. At any rate, Dr. Binet-Sanglé, chief of the service of medical statistics of the army, has just drawn attention to the high morbidity in the French army. According to comparative statistics for the five-year period from 1903 to 1907, France occupies the first place for measles, scarlet fever, mumps, diphtheria, dysentery and acute articular rheumatism; the second place for tuberculosis and cerebrospinal meningitis; and third place for typhoid fever and influenza. During the same five-year period there were in the German army about half as many cases of influenza, diphtheria and cerebrospinal meningitis; one-fifth as many cases of scarlet fever; one-sixth as many of typhoid fever; one-sixteenth as many of dysentery; one-twenty-first as many of measles; and one-twenty-second as many of mumps as in the French army. Dr. Binet-Sanglé does not believe that these defects are the fault of the sanitary service of the army or of the minister of war. But at present the government is almost helpless against the civil epidemics. The law of 1902 regarding the protection of the public health is not applied. Physicians do not report contagious diseases, or, at least, they do not report against the wishes of their patients, and the latter very often, especially in commercial life, exact professional secrecy of their physicians. It therefore happens that municipalities themselves endeavor to conceal epidemics in order not to frighten away travelers and to upset business. Dr. Binet-Sanglé believes that to remedy the situation, it would be necessary to complete the law of 1902 by obliging heads of families, hotel-keepers and lodging-house keepers to be responsible along with the physicians for reporting contagious diseases. It would likewise be necessary to replace the municipal health officers by officers paid by the general government and place them under its authority. It may well be questioned, however, if these measures will be really helpful while the services of disinfection are inadequate. What is especially necessary is a service of automobile disinfecters which could go into the smaller villages to check epidemics.

Syphilitic Ulcerous Chancriform Lesions and Salvarsan

On March 1, Dr. Ravaut showed before the Societé médicale des hôpitaux de Paris a patient with ulcerous syphilids, who, in March, 1911, received three injections of 0.6 gm. of salvarsan. During last January this patient presented a chancriform indurated lesion of the gland with inguinal adenopathy. A syphilitic reinfection might have been suspected, but the absence of spirochetes on the surface and in the tissues of the lesion, the absence of chancre histologic lesions, shown by biopsy, as well as the absence of secondary lesions from four to seven days after the beginning of the chancriform lesion, eliminate this diagnosis. Moreover, the appearance of new chancriform lesions was observed thirty and forty days after the first. It was possible to reproduce these by inoculations of the arm.

Dr. Thibierge showed a man, aged 31, who after having received three injections, last January, of 0.3, 0.4 and 0.3 gm. of salvarsan respectively, for a syphilitic chancre at the base of the penis, had a phagedenic ulcer which resembled an infectious chancre, and which appeared at the same level as the scar of the initial chancre. Below this ulceration two other smaller ones, without phagedenic tendencies, were observed. On the surface of this ulceration no spirochetes could be found The patient having had no sexual relation since the beginning of the lesion, a syphilitic reinfection could not be suspected.

Dr. Jeanselme remarks how much the two cases reported by Drs. Ravaut and Thibierge demand reserve in the interpretation of lesions appearing in syphilitics treated by salvarsan during the primary period. Nevertheless, the possibility of a syphilitic reinfection after a treatment by salvarsan cannot be denied. Dr. Jeanselme had observed two cases, the authenticity of which could not be doubted, for they were characterized by the existence of an erosive, parchment-like lesion, with spirochetes, Wassermann reaction negative on the twelfth day with the change to a positive on the twenty-fourth day, and appearance of an roseola at the end of five or six weeks.

Deaths

Dr. Debrie, médecin principal of the first class, former director of the sanitary service of the troops at Morocco, has just died, aged 53.

The death of Dr. Paul Triaire of Tours, national correspondent of the Académie de médecine de Paris, is reported. He was a very learned man. He has written two books, one, on Recamier and her contemporaries, the other, on Bretonneau and his correspondents (Trousseau and Velpeau).

The Horace Wells Prize

There will be awarded in 1915 a prize of 300 francs to the author of the best memoir on the improvement of present anesthetic processes, or to the author of a discovery of an anesthesia considered worthy of the attention of the jury, or to the inventors of apparatus, processes or methods markedly facilitating anesthesia. The memoirs may be addressed to M. Quincerot, président du Comité Horace Wells, 28, rue de Moscou, Paris. The memoirs must be written in French. A device should accompany the manuscript, also a sealed envelope bearing on the outside the device and containing the name and address of the candidates.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 8, 1912.

Personals

Professor Opitz, director of the gynecologic clinic at the academy for practical medicine at Düsseldorf, has accepted the call to Giessen. Professor Sellheim of Tübingen has been called in his place.

Professor Sobotta of Würzburg has been appointed a professor extraordinary to lecture on topographic anatomy.

Professor Schütze, director of the bacteriologic department of the Berlin municipal hospital, Moabit, who had gone to the seat of war at Tripoli as a member of the expedition of the German Red Cross, died in the Turkish main camp from typhoid. Schütze was for a number of years assistant at the institute for infectious diseases under Robert Koch. He has published various well known works on bacteriology and

biology, and was a member of the expedition of the German Red Cross in the Russo-Japanese war in Manchuria. He was 40 years old.

The death is reported from Constantinople of the privy counsellor for sanitation, Geheimer Sanitätsrat Dr. Mordtmann, for many years physician to the German embassy, aged 76. He worked there for many years in the German hospital and had won for himself by his medical activity the confidence and favor of the best circles of Constantinople society. His literary work extended not only to medicine but also to history, philology, and especially to the topography of ancient Byzantium.

Professor Czerny, the noted Heidelberg surgeon, has resigned from the sanitary corps, to which he belonged as surgeon-general of the reserves. According to statements in the daily papers a voluntary resignation was suggested to him for political reasons. Czerny before the election expressed himself in a political journal as opposed to the conservatives and in favor of a union of the parties of the left, and in this recommendation of a combination with the social democrats the authorities are said to have seen an offense which warranted them in advising the resignation of Czerny from the sanitary corps.

No authentic statement has yet been given of Czerny's side of the matter and there is still reason for question whether the reason assigned is the real one. I cannot regard it as probable because in the first place the government of Baden is of a very liberal disposition and not so distinctly opposed to the social democrats as in other states. Besides Czerny is in his seventieth year and it is very easy to understand that he may have resigned from the army on account of his advanced age.

Extension of the Imperial Insurance Law

A supplement to the imperial insurance law is being prepared by the government in the form of a law for the insurance of firemen and nurses. The bill will not come to discussion in the legislative bodies until autumn.

A New Children's Hospital

The city of Berlin contemplates the building of a new municipal hospital for children under 3 years of age, with 220 beds. The building is urgently needed for Berlin as the departments for children in the present hospitals are quite insufficient for the increasing demands on them. There exists so far only a single children's hospital, the Kaiser- und Kaiserin-Freidrich Kinderkrankenhaus, conducted by Professor Baginsky. In the other municipal hospitals only small wards are provided for children and as a rule none for infants.

Demonstration of Swiss Students Against a German Professor

A few days ago some hundreds of the Berne medical students got up a demonstration against Professor Kolle, the present director of the local institute for the investigation of infectious diseases and for many years assistant of Robert Koch, by conducting a serenade of so-called *Katzenmusik* (cat music) in front of his residence. How far in this matter national, that is to say anti-Prussian tendencies, were displayed remains to be determined. The ostensible cause was the failure of certain students to pass the state's examination in hygiene, on account of insufficient knowledge. It is true that there had previously been some occasional opposition to Professor Kolle, who is of a somewhat rough disposition, and in his lectures may have treated his hearers many times somewhat too harshly. In Switzerland, as is well known, every citizen regards himself a free lord (*fühlt sich als freier Herr*), as is apt to be the case in democratic states, and so it is easy to understand that the ill will of the students made itself particularly felt against a foreign professor. That there is no general opposition to Professor Kolle is shown by the fact that the medical faculty of Berne as well as many prominent persons of other circles in society, have expressed their regrets to Kolle on account of this scene and have tendered him the assurance of their high esteem. However, these occurrences will not make Professor Kolle's life in Berne any pleasanter, and he will strive so much the more hereafter to secure at the first opportunity a call to his native country to a German professorship of hygiene.

Medical Study Tour to America

The German central committee for medical study tours is planning an expedition to Washington in connection with the international congress of hygiene in September, as already described in THE JOURNAL, page 206. The participation is very lively so that there are only forty places vacant on the Hamburg-American steamer Cincinnati, which was chartered by the committee. The excursion sails September 7 from Hamburg and returns from New York October 10 on the Victoria-Luise. Visits to New York, Philadelphia, Atlantic City, Baltimore, Washington, Chicago, Niagara Falls, Montreal, Albany and Boston are contemplated.

Wholesale Poisoning in a Military School

A few days ago 187 men in a school for non-commissioned officers at Potsdam took sick within twenty-four hours with a febrile gastro-intestinal affection. The germ of meat poisoning was detected in the stools. The suspicion that the disease was occasioned by partaking of dinner was thus confirmed. The course of the disease was favorable in all cases. After a few days the patients could leave their beds.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 4, 1912.

Action Against the Scarcity of Lodgings

For a couple of years, there has been a decided scarcity of middle-sized lodgings in this city, as numerous old houses still in good condition were pulled down, to make place for new flat buildings for the sake of higher profits. This has become a real calamity; rents have gone up from 30 to 50 per cent. with disastrous results to the poorer classes of the population, as the sum available for nourishment is thus considerably lowered. The *Krankenkassen* have now devoted part of their reserve funds, a little over $200,000, to the erection within one year in Vienna and its outskirts of houses with altogether 2,000 lodgings. The government has undertaken to guarantee this action, so the erection is ensured. They will be let only to members of the *Krankenkassen*, people who belong to the wage-earning class with an income of less than $600 (3,000 kronen) a year and who have suffered most under the recent paucity of lodgings. Furthermore, they will obtain under this scheme healthy lodgings, hitherto not easily to be had, as gardens will be provided for as well as all modern hygienic arrangements. Naturally, this action of the *Krankenkassen* will improve the health of their members.

Health Conditions in Vienna in 1912

Up to March 1 the year 1912 has been fairly satisfactory as regards public health in Vienna, for nearly all infectious diseases, except influenza, were markedly less frequent than during the previous year. No new case of small-pox, dysentery, epidemic cerebrospinal meningitis, puerperal fever or trachoma was reported to the board of health; there were 2,460 cases of measles, 510 cases of scarlet fever and twenty of typhoid (the latter all imported); the figures for diphtheria were 316 (4 per cent. mortality) parotitis 258, and 217 for erysipelas. The general mortality in Vienna was 16 per cent. Only influenza was frequent, owing to the very changeable weather, with frosts and warm weather alternating. The year's type of the disease was characterized by mild complications of the ear and the nasal sinuses. Thus the practitioners were fairly busy up till now, contrary to the conditions last fall and in the beginning of winter.

Number of Physicians in Austria

The official figures relating to the number and distribution of medical men for the end of 1911 are now published. There is quite an interesting difference between this year and the one preceding it (see THE JOURNAL, April 29, 1911, p. 1275). The increase in number as compared to that shown at the end of 1910 was 62, or 0.47 per cent., for we now have 13,264 practicing or qualified doctors of medicine on the register. This increase is very small compared with the previous rates of increase (from 4 to 6 per cent. a year for the last ten years). This is readily explained by the fall in numbers of medical students within the last sixteen years up to 1906, but the outlook is still worse, for since 1906 that number has clearly more than doubled; although the population increases in this country by a little over 2 per cent. yearly, the doctor's diplomas will within the next few years increase much more rapidly. Especially the large towns and cities attract physicians, while the country is often very poorly supplied. In our cities the proportion of physicians per ten thousand of population is in Innsbruck 24, Olmütz 27, Cracow 21.6, Lemberg 19.8, Graz 19.6, Vienna 14.9. The latter two cities show only a very slight proportionate increase, while the other towns have from 5 to 8 per cent. more physicians

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than a year ago. The country, however, shows a decrease of from 2 to 3 per cent., and the distribution for the whole empire is shown by the figure of 4.60 per ten thousand of population. As regards the towns, specialization is increasing. Thus 34 per cent. of the total number prefer to be considered specialists, while only 37 per cent. are general practitioners. The remainder are assistants in hospitals or are engaged in purely theoretical work such that they cannot practice privately. Therefore there were 199 appointments vacant in the country districts, mostly because they were untenable without a substantial fixed salary, and this the local authorities were unwilling or unable to pay. The number of female doctors was just 100, or twenty more than a year ago. They are 7.5 per cent. of the total number of physicians and are mostly employed by organizations or municipalities and are chiefly specialists for diseases of women and children. The overproduction of doctors in towns has been, for some time, seriously commented on and endeavors by the state and by medical organizations to induce young doctors to settle in the country have been futile up to the present. There is one means of attaining the desired object, but this entails an expenditure of money—*hinc illæ lacrimæ*. Meanwhile, in small municipalities new hospitals are being erected offering new opportunities for specialization.

Sale of the Gastein Radio-Active Springs

The famous springs of Gastein, hitherto private property of the Austrian dynasty, have been sold to the two municipalities forming the community of Gastein. This transacton will enable the waters of the springs—the strongest radio-active springs in Europe, perhaps in the world—to be used for medical purposes in a more extensive way. The price was about $200,000.

The "Pollard" System in Austria

The Pollard system (named after Judge Pollard of St. Louis), which postpones the punishment of a culprit who violates the law when intoxicated and makes him promise to abstain from alcohol under the penalty of having the first punishment exacted, is now being given here an extensive trial. We have here now special juvenile courts (*Jugend Gerichtshof*). Here the moral educative side of the law is brought more to the foreground, and as restriction from the alcohol pest is an important feature of these actions, it will be interesting to observe what good will actually be done. The age limit is here 18 years; older persons fall under the jurisdiction of the ordinary law.

Marriages

CHARLES AUGUSTUS CARPENTER, M.D., Irvington-on-Hudson, N.Y., to Miss Maude Cecile Tucker of St. Paul, Minn., in New York City, March 12.

FREDERICK CARLYLE HYATT, M.D., Greensboro, N. C., to Miss Myrtle Anna Cook of Harrisburg, Pa., at Asheville, N. C., Dec. 23, 1911.

ROBERT CAMPBELL, M.D., Jamaica, New York City, to Emma Merce Morrison of New York City, February 7.

J. GUY STROHM, M.D., Portland, Ore., to Miss Helen Mitchell of Chicago, in Portland, March 20.

Deaths

James Rufus Tryon, M.D. University of Pennsylvania, Philadelphia, 1860; surgeon-general U. S. Navy, retired; a member of the Association of Military Surgeons of the United States; died in the United States Naval Hospital, Brooklyn, March 21, aged 75. He entered the Navy as assistant surgeon in 1863, served through the Civil War and, after passing through all grades, was appointed surgeon-general in 1893, and was retired Sept. 24, 1899, on attaining the age of 62 years, with the rank of rear admiral.

James Calvin King, M.D. New York University, New York City, 1865; a member of the Medical Society of the State of Pennsylvania and a charter member, vice-president and president of the Jefferson County Medical Society; died at his home in Reynoldsville, March 11, from cerebral hemorrhage, aged 70.

Frederick Henry Colton, M.D. Long Island College Hospital, 1864; visiting physician to Long Island College and St. John's hospitals, Brooklyn, for more than twenty-five years; acting assistant surgeon U. S. Army from 1863 to 1865; sanitary inspector of the Metropolitan and Brooklyn boards of health from 1866 to 1873; for seven years demonstrator of anatomy in his alma mater and for nineteen years secretary and director of the Brooklyn Eye and Ear Hospital; died at his home in Brooklyn, March 16, from arteriosclerosis, aged 72.

Alexander Hadden, M.D. College of Physicians and Surgeons, New York City, 1859; of New York City; formerly physician to the Nursery and Child's Hospital and attending physician to the Presbyterian Hospital; founder and president of the board of trustees of, and consulting physician to, the Northeastern Dispensary; died suddenly March 16 on a train between Rocky Mount, N. C., and Richmond, Va., from heart disease, aged 78.

Robert Rasmussen Rome, M.D. Hahnemann Medical College, Chicago, 1891; University of Minnesota College of Homeopathic Medicine and Surgery, 1892; formerly a member of the American Medical Association; a member of the Minnesota State Medical Association; a member of the medical staff of Asbury, the Swedish and Deaconess hospitals, and the City Hospital, Minneapolis; died at his home in Minneapolis, March 12, aged 48.

Alexander E. Garceau, M.D. University of Vermont, Burlington, 1881; for seventeen years a practitioner of Chicago and for four years prior to that time a post-graduate student in Paris; dermatologist to the Telegraph Hill Polyclinic, San Francisco, and consulting dermatologist to the San Francisco Maternity Hospital; died in the Adler Sanatorium, San Francisco, March 14, two days after an abdominal operation, aged 57.

Samuel Catlin, M.D. Yale University, New Haven, Conn., 1851; said to be the oldest alumnus of that institution; formerly a member of the American Medical Association; for many years an active, and later an honorary member of the Michigan State and the Lenawee County medical societies; a surgeon of Volunteers during the Civil War; died at his home in Tecumseh, March 14, from senile debility, aged 86.

John Guy Hollyday, M.D. University of Maryland, Baltimore, 1868; a member of the Medical and Chirurgical Faculty of Maryland and a Confederate veteran; for many years attending physician to St. Joseph's Monastery, St. Mary's Industrial School and Mount St. Joseph's College; for forty-two years a practitioner of southwest Baltimore; died at his office, March 15, from pneumonia, aged 66.

Daniel J. Coleman, M.D. Medical College of Virginia, Richmond, 1884; a member of the American Medical Association; since 1904 professor of obstetrics and diseases of the puerperal state in his alma mater; and for many years connected in various teaching capacities with that institution; one of the most prominent practitioners of Richmond, died at his home, March 17, from pneumonia, aged 45.

Thomas Kelly, M.D. McGill University, Montreal, 1873; M.R.C.S., Eng., 1881; assistant surgeon of the Burlington and Union Pacific systems at South Omaha, Neb.; for several years in the British Colonial Service in South Africa and India, and for four years surgeon in the Royal Navy; since 1879 a resident of South Omaha; died at his home March 11, from cerebral hemorrhage, aged 60.

Carlos Phillips Tucker, M.D. College of Physicians and Surgeons, New York City, 1849; formerly a member of the American Medical Association, and one of the charter members of the New York Academy of Medicine; for several years attending surgeon to Trinity Hospital, New York City; died at his home in Mount Vernon, N. Y., March 10, from senile debility, aged 89.

Joshua T. Purcell, M.D. Indiana Medical College; College of Physicians and Surgeons, Indianapolis, 1877; a pioneer practitioner of Champaign County, Ill.; a veteran of the Civil War; for thirty-six years a practitioner of St. Joseph; died at his home, March 10, from pneumonia, aged 67. At his funeral addresses were made by representatives of the Champaign County Medical Society.

Andrew Henderson Whitridge, M.D. Johns Hopkins Medical School, Baltimore, 1898; a member of the American Medical Association and for several years medical director of the Maryland Life Insurance Company; died in the Union Protestant Infirmary, Baltimore, March 19, five days after a surgical operation on the stomach, aged 40.

Ludwig Schroeter, M.D. University of Berne, Switzerland, 1889; a member of the American Medical Association; for more than twenty years a practitioner of Buffalo and consulting physician to the Maternity and General hospitals and attending physician to the German Hospital; died recently in Capri, Italy, where he had gone in search of health, aged 51.

George Ralph Schuster, M.D. Miami Medical College, Cincinnati, 1897; a member of the American Medical Association; coroner of Montgomery County, O., from 1907 to 1909; for a time assistant physician at the Dayton State Hospital; died at his home in Dayton, March 13, from pneumonia, aged 37.

George Kelly Allison, M.D. Jefferson Medical College, 1911; of West Newton, Pa.; house surgeon in the Charity Hospital, Cleveland, O., who was operated on for appendicitis in that institution early in February; died at the home of his aunt in Girard, O., March 7, from spinal meningitis, aged 25.

Thomas Nehemiah Eastman, M.D. Jefferson Medical College, 1881; a member of the American Medical Association; of Uniontown, Pa.; once a member of the borough council and of the board of health; died suddenly March 14, while making a professional call at Dalsinger, Pa., aged 55.

Edmund K. Goldsborough, M.D. Medical College of Virginia, Richmond, 1864; a widely known practitioner of the Eastern Shore of Maryland, and Washington; surgeon in the Confederate service during the Civil War; died at his home in Washington, March 14, from heart disease, aged 68.

Hamilton Rickaby, M.D. New York University, New York City, 1867; a member of the staff of the Metropolitan and Hahnemann hospitals, New York City, and for twenty years superintendent of the West Homeopathic Dispensary; died at his home in New York City, March 10, aged 69.

Hannah T. Croasdale, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1870; professor and emeritus professor of gynecology in her alma mater; for many years a practitioner of Philadelphia; died at the home of her daughter in Syracuse, N. Y., March 15, aged 77.

William E. Sprenger, M.D. University of Basle, Switzerland, 1871; surgeon in the German service during the Franco-Prussian war; a specialist in *x*-ray work; died at the home of his daughter in New Haven, Conn., March 13, from the effects of an *x*-ray burn, aged 63.

Albert Merrill Webster, M.D. Cleveland (Ohio) College of Physicians and Surgeons, 1900; a member of the Ohio State Medical Association; an enthusiastic athlete and well-known practitioner of Lorain; died at his home, March 14, from pneumonia, aged 37.

Oscar Redd Colbert, M.D. College of Physicians and Surgeons, Baltimore, 1885; a member of the Medical Society of Virginia, and a practitioner and dentist of Warrenton; died at his home, February 1, from epithelioma of the ear and jaw, aged 68.

David Thomas Bowden, M.D. University of Maryland, Baltimore, 1889; a member of the American Medical Association; chief surgeon of the Orthopedic Department of the Paterson (N. J.) General Hospital; died at his home in Paterson, March 18, aged 46.

Mark Lyton Pettit, M.D. Cooper Medical College, San Francisco, 1893; of Visalia; a member of the Medical Society of the State of California; died in St. Francis Hospital, San Francisco, March 12, from acute ascending diffuse myelitis, aged 44.

Alexander Perry, M.D. College of Physicians and Surgeons, New York City, 1844; a veteran of the Mexican War and formerly collector of the port of La Paz, Cal.; died at his home in New York City, March 13, from senile debility, aged 88.

William C. Eichler, M.D. Minneapolis College of Physicians and Surgeons, 1908; formerly of St. Paul, and Underwood, N. Dak., who recently established an office at Fergus Falls, Minn., died in that city, March 11, from pneumonia, aged 26.

Jessup David Bell, M.D. Pulte Medical College, Cincinnati, 1893; a member of the American Medical Association; died at his home in San Antonio, Tex., March 10, from pneumonia, contracted while in Mexico three weeks before, aged 44.

David C. Bowen, M.D. University of Louisville, Ky., 1889; a member of the Kentucky State Medical Association and Muldraugh Hill Medical Society; died at his home in Elizabethtown, March 16, from tuberculosis, aged 51.

Nelson Scott Blue, M.D. Medical College of Ohio, Cincinnati, 1891; of Defiance, O.; a member of the Ohio State Medical Association; died at his old home in Ayersville, O., March 13, from cerebral hemorrhage, aged 50.

Ellen Marie Oviatt, M.D. Hahnemann Medical College, Chicago, 1896; Gross Medical College, Denver, Colo., 1902; for two years a practitioner of Benton Harbor, Mich., and thereafter engaged in the practice of medicine, and sociologic and psychologic research in Denver; died in Okolona, Ark., March 11, from nephritis, aged 39.

Charles F. Stewart, M.D. Eclectic Medical Institute, Cincinnati, 1864; acting assistant surgeon, U. S. Army throughout the Civil War; superintendent of the Nebraska Hospital for the Insane for five years; a pioneer practitioner of Nemaha County; died at his home in South Auburn, March 15, aged 79.

Sidney Franklin Rogers, M.D. Albany (N. Y.) Medical College, 1882; for one term coroner of Rensselaer County, N. Y.; a practitioner of Troy till 1897; died at his home in Cohoes, March 7, from nephritis, aged 64.

Edwin Solomon Breyfogle, M.D. Hahnemann Medical College, Philadelphia, 1875; formerly of Columbus, O., but for several years a practitioner of San Francisco; died at his home in Palo Alto, Cal., March 14, aged 57.

John Miller Kennedy, M.D. College of Physicians and Surgeons, New York City, 1887; of New York City; died in Bellevue Hospital, March 11, from pneumonia following an attack of influenza, aged 49.

George Stanton Hamilton, M.D. Jefferson Medical College, 1851; one of the most prominent practitioners of Culpeper County, Va.; died at his home in Lakota, March 3, from cerebral hemorrhage, aged 82.

Charles Frederic Patton, M.D. Trinity Medical College, Toronto, Ont., 1873; for thirty-five years a practitioner of Bannister, Mich.; died at the home of his brother in Detroit, March 12, from carcinoma.

William Vincent Dee, M.D., Long Island College Hospital, Brooklyn, 1893; a member of the Medical Society of the State of New York; died suddenly at his home in Brooklyn, from myocarditis, aged 47.

Charles Perry Martin, M.D. University Medical College of Kansas City, Mo., 1883; of Jameson, Mo.; died in Ensworth Hospital, St. Joseph, March 15, four days after an operation for appendicitis, aged 50.

Augustus Harper Raiguel Guiley, M.D. Jefferson Medical College, 1877; a member of the Medical Society of the State of Pennsylvania; died at his home in Easton, March 9, from heart disease, aged 56.

George A. Harker, M.D. University of California, San Francisco, 1904; a member of the American Medical Association; died at his home in Mill Valley, Cal., March 9, from heart disease, aged 35.

Hans Christian Johnson, M.D. University of Missouri, Columbia, 1898; of Meadville; a member of the American Medical Association; died in a sanatorium in Santa Fe, N. Mex., March 12, aged 35.

Thomas Gilluly, M.D. Rush Medical College, 1871; a member of the State Medical Society of Wisconsin; died at his home in Union Center, March 6, from cerebral hemorrhage, aged 71.

Anna Ruth Copeland, M.D. Baltimore University School of Medicine, 1903; a practitioner of medicine and dentistry of Baltimore; died in a sanatorium in that city, March 9, aged 28.

William H. Galbreth, M.D. University of Louisville, Ky., 1893; a member of the American Medical Association; died at his home in Rockfield, Ind., March 12, from carcinoma, aged 44.

Joseph William Perry, M.D. Jefferson Medical College, 1856; formerly a practitioner of Texas; died at his home in Pauls Valley, Okla., February 15, from senile debility, aged 81.

Edward D. Thomas, M.D. Starling Medical College, Columbus, O., 1874; died at his home in Garnett, Kan., March 12, from tuberculosis, aged 66.

Mary Frances Butterworth, M.D. Tufts College Medical School, Boston, 1895; died at her home in Revere, Mass., March 14, aged 66.

William I. Rouse, M.D. Jefferson Medical College, 1909; of Ogontz, Pa.; died at Stamford, Conn., March 10, from pneumonia, aged 27.

John W. Valpey (license, Illinois, years of practice, 1880); died at his home in Chicago, March 13, from senile debility, aged 79.

David B. Plumlee, M.D. University of Nashville, Tenn., 1886; died at his home in Butlers Landing, Tenn., March 9, aged 62.

Francis P. Langfitt (license, Allegheny County, Pa., 1891); died at his home in Pittsburgh, March 10.

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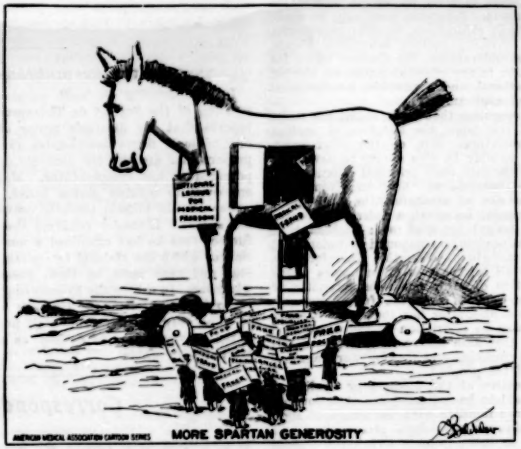
The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

NATURE'S CREATION

A Peep Behind the Scenes

"When thieves fall out, honest men get their dues"; when "patent medicine" fakers fall out, the general public is given an insight into this disreputable business which is instructive if not edifying. Nature's Creation is a cruel consumption cure fraud that has been exposed at various times[1] in THE JOURNAL. It was first sold, as will be remembered, as a cure for syphilis; later its commercial possibilities as a "consumption cure" seemed to have occurred to the exploiters of this humbug and it blossomed forth in its new guise. It is claimed that Nature's Creation was "discovered" by a Mrs. J. M. Reynolds. It was first put on the market—as a syphilis cure—by the H. W. Campbell Co. of Chicago. Later, the concern was transferred to Columbus, O., and the name of the company changed to Nature's Creation Co. At this time the metamorphosis of Nature's Creation from a syphilis "cure" to a consumption "cure" occurred.



The stuff was analyzed in the Association's laboratory and while the advertisements stated that it was "made entirely from vegetable matter," it was found to be essentially a solution of potassium iodid in water and alcohol with small quantities of inorganic salts and flavoring matter with vegetable extractives. It was sold at $5 a bottle.

The motive power behind the Nature's Creation concern was H. W. Campbell; Mrs. Reynolds was largely a figurehead. Now it seems that this couple are no longer friends, for, two or three weeks ago, Campbell filed suit against Mrs. Reynolds (who, by the way, is now a Mrs. Cohen) to recover $28,000 of which he alleges she has defrauded him.

The petition filed in this case is interesting. In it, Campbell declares under oath that Nature's Creation, which is sold at $5 for a twelve-ounce bottle, costs but 2 cents an ounce to make. This does not mean that Campbell's conscience is hurting him because the indigent consumptives and others who have bought this worthless stuff have been robbed! Not at all! He is merely angry because he considers that he has not received his full share of the "swag." It appears from the petition that Mrs. Cohen (Reynolds) has been "holding out" on Campbell. It seems, if we are to believe Campbell's sworn statement, that Mrs. Reynolds was telling fortunes in a Chicago basement when he "discovered" her. When these two decided to float Nature's Creation, Mrs. Reynolds, evidently believing that a man who would engage in such a disreputable business was not to be trusted, kept the secret of the "formula" of this potassium iodid mixture and charged Campbell 25 cents an ounce as the cost price of the ingredients; later she lowered the rate to 10 cents an ounce. But Campbell swears that the cost of making it has never been more than 2 cents an ounce or 24 cents a bottle.

Nor is this all. Campbell further complains that Mrs. Cohen (Reynolds) called a special meeting of the directors of the company and ousted him without cause from his position of secretary and treasurer. And, worse than that! Campbell, believing that the stock in the company had depreciated from par to 10 cents on the dollar, sold it at that rate when he had an opportunity, as he believed, to "get out from under." Having found that the stuff costs only 2 cents an ounce to make instead of 10 cents or 25 cents an ounce, Campbell realizes that the profits in this form of scoundrelism were much greater than he supposed and he is convinced that the stock was easily worth par and that in selling his shares for 10 cents on the dollar, he has lost thousands of dollars. Campbell is particularly mortified, moreover, to find—what he did not know at the time—that the individual to whom he sold his stock was Mrs. Cohen herself. In consequence of these alleged deceptions, Campbell claims that Mrs. Cohen owes him more than $28,000 and he is appealing to the courts in the hopes of getting it.

A sordid business! Yes, but the sale of a fraudulent consumption cure can scarcely be anything else. We can only express the hope that the publicity thus given to the details of the exploitation of this cruel fraud will prove the *coup de grâce* for Nature's Creation. We trust, too, that the courts will hold that Campbell, having been engaged in a disreputable and fraudulent business, cannot receive the protection of the law, but that he stands condemned as a self-confessed faker who has defrauded the helpless sick for his personal gain.

1. THE JOURNAL A. M. A., March 5, 1910, and Feb. 4, 1911. Reprinted in pamphlet form, price 4 cents; also appears in "Nostrums and Quackery."

OBJECTIONABLE PROPRIETARY NAMES

The following circular letter is being sent out by the Council:

To Manufacturers of and Dealers in Medicinal Products:

Gentlemen:—The Council on Pharmacy and Chemistry of the American Medical Association, since its organization, has been obliged to refuse recognition to a number of otherwise unobjectionable preparations, because their names were considered detrimental to the best interests of the public and the medical profession. In the hope that in the future those who introduce new remedies may see their way clear to adopt names which will not be open to objection, the Council has decided to issue this explanatory statement to the manufacturers of medicinal substances.

The trade names of pharmaceutical preparations or mixtures should be so framed as to indicate the most potent ingredients. An article whose name gives a false impression in regard to its identity or origin or which is in other ways misleading would not be acceptable for New and Nonofficial Remedies. An article will not be acceptable if its name sug-

gests to the laity the diseases or conditions in which it is said to be indicated.

After Dec. 31, 1912, recognition will be refused also to names so framed as to indicate even to physicians the diseases or conditions for which the article is to be used. The Council will make no objection to articles submitted to it before Dec. 31, 1912, on the ground that the name is suggestive to the physician, provided that the name is already in use at the time of submission and also provided that the name is so framed as not to be liable, in the judgment of the Council, to lead to self-medication on the part of the public.

Medicine, in common with other branches of knowledge, requires that the subjects with which it deals be provided with a rational, descriptive nomenclature. The Council holds it desirable and important not only that the medicaments official in the pharmacopeias should be provided with scientific names, but that those of a proprietary character should also have names which are descriptive of their composition. Further, the Council believes that the interests of both the manufacturer and the consumer, the physician and his patient, can be sufficiently safeguarded if to the descriptive name of an article there be appended a distinctive word, syllable, initial or sign that shall identify its manufacturer. In substantiation of this it may be stated that such designations have permitted manufacturers to build up almost world-wide reputations for their products. Reference need only be made to chloral hydrate, Schering; chloroform, Squibb; phenacetin, Bayer; quinin sulphate, P.W.R.; sodium salicylate, Merck, etc. In view of these considerations, the Council offers its endorsement and cooperation to any effective movement toward the establishment of a rational, and if possible, international system for the naming of medicaments.

However, the Council recognizes that trade conditions make difficult or infeasible, at this time, the adoption of such a rational system of nomenclature. But, on the other hand, experience has shown it possible to give names to new remedies which at least shall indicate their principal constituents. Thus among the articles described in "New and Nonofficial Remedies" appear such names as arsenoferratin, an organic compound of iron and arsenic; bornyval, a valeric acid ester of borneol; brovalol, a bornyl bromvalerate; carbosant, a carbonate of santalol; guaiacodein, a compound of codein and guaiacol; tannismuth, a tannate of bismuth. Therefore the Council recommends that all remedies be given names which shall at least be suggestive of their most characteristic or potent constituents. The Council gives the fullest recognition to the principle that a discoverer has the right to name his discovery and interposes no restriction in the naming of new substances, provided that such names shall not be detrimental to the progress of medicine and thereby work against the welfare and health of the people.

Names which are suggestive of the diseases or conditions in which the remedy is said to be indicated are objectionable because the layman becomes familiar with the names of such remedies and their uses through physicians' prescriptions and is thus led to use them in indiscriminate and harmful self-medication. The many cases of harmful self-medication with such remedies as migrainin, diabetin, purgen, antikamnia, antitussin, which preparations at first were exploited to medical men only, are sufficient to show that such names should be forbidden.

But even if the name of a remedy does not disclose its proposed use to the laity, it is still objectionable if it suggests to the medical man the diseases or conditions in which the remedy is to be used. This for the reason that the thoughtless physician will base his use of the remedy on the name without giving due consideration to the condition and symptoms of the patient.

Recognizing that some therapeutically suggestive names have been applied without any intention of appealing to the laity thereby, and further recognizing the difficulty of changing a name once established, the Council has decided to make no objection to names that are now in use if they are therapeutically suggestive to physicians only. Such articles, if on the market and submitted prior to Dec. 31, 1912, will be considered acceptable in so far as their names are concerned.

The following rules apply to the names of articles proposed for inclusion with New and Nonofficial Remedies:

1. The names of pharmaceutical preparations or mixtures must indicate the most potent ingredients.
2. Names which are in any way misleading will not be accepted.
3. Names which suggest diseases, pathologic conditions, or therapeutic conditions will not be admitted, except as provided under 4.
4. An exception is made for established names of synthetic substances, active principles, and other new substances: For these if submitted prior to Dec. 31, 1912, therapeutically suggestive names may be admitted, provided that the name has been in actual use prior to Dec. 31, 1912, and provided further, that the name is not likely to foster self-medication by the laity.

W. A. PUCKNER, Secretary.

WINSLOW'S SOOTHING SYRUP BARRED IN AUSTRALIA

The board of health of New South Wales has prohibited the advertising and sale in that commonwealth of Mrs. Winslow's Soothing Syrup, as being injurious to life. The decision has been advertised in the Sydney papers so that the public, the newspapers, the druggists and the manufacturers may know what has been done. We are optimistic enough to believe that the time will come, in a not far distant future, when a similar prohibition for this and similar dangerous nostrums will be operative in this country. The indiscriminate sale of such dangerous opium-laden products is a disgrace to any civilized community that permits it.

INSTABILITY OF DIASTASE PREPARATIONS

In a discussion on malt preparations at the November meeting of the Société de Thérapeutique de Paris,[1] Chevalier reports that the diastasic power of malt, of malt extracts and of malt flours deteriorates rapidly. The most durable preparations are the dry extracts or pastes which have been prepared at low temperatures. Malt-extracts should not be employed in making gluten bread, since whatever diastasic power may be present tends to convert the starches into soluble sugars. Linossier confirms these statements and states further that he has examined a number of pharmaceutic specialties which are claimed to contain malt, pepsin, pancreatin, etc., and that most of them possessed no diastasic power whatever. In others the hydrolyzing power was so attenuated as to be practically *nil*. He calls attention to the necessity of using only recently-made malt preparations in therapeutics if the enzyme action be desired, as at best these preparations are not very stable.

Correspondence

A Protest Against Dr. Wiley's Resignation

To the Editor:—The forced resignation of H. W. Wiley calls for energetic and universal protests from the medical profession. The investigation of the Moss committee shows precisely where the focus of iniquity is located and whence is spread the infectious virus which permeates the entire department under which Wiley worked. This department is in need of complete regeneration from top to bottom. This will be done only through force of enlightened public opinion.

Every physician should send a protest to the senators from his state and the congressman from his district, stating briefly and clearly his position as regards the proper enforcement of the pure food and drugs law, and endorse in positive terms the work done by H. W. Wiley. Our county societies should bestir themselves and pass resolutions to the same effect, copies of which should be forwarded to the President and to every United States senator and congressman.

This work should be done at once while the matter is fresh in the public mind. Let THE JOURNAL continue its good work and let us all cooperate with it and all other journals and organizations which favor this nation-wide endorsement for sanitary foods and pure honest drugs.—JULIUS NOER, Stoughton, Wis.

1. Jour. de pharm. et de chim., 1912, v, 92.

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A Nomination of a Successor to Dr. Wiley: Professor Ladd of North Dakota

To the Editor:—Having read, like thousands of others, your editorials on Dr. Wiley, I take the liberty of suggesting that North Dakota has a man who has taught and enforced rules of sanitation for shops, stores and transportation as I have not seen them elsewhere and has made the state of North Dakota particularly hot for fraudulent food and drug dealers and manufacturers. That man is Prof. E. F. Ladd, food commissioner of North Dakota. After nine years' residence in the state, during which the monthly bulletin of his department (a regular treat) kept me as well as the rest of the medical profession and the people at large posted, I feel that he stands at the head of his class as a pure food expert and that there are few in that class.

All forms of food, drugs and beverages must be and are correctly labeled in North Dakota or they become a source of trouble to their venders as well as manufacturers; and "North Dakota Series" is the label found on more than one brand of goods that show the manufacturers had to obey the laws of that state and that they do not make a general practice of producing the same product for shipment to other states.

This is surely the time to turn the lime-light on Prof. E. F. Ladd. For indefatigable energy, implacable courage and honesty, aside from his technical ability and executive experience he is certainly, if chosen, the man to continue the good work of Dr. Wiley. A fearless exponent of what is right, he is a regular Nemesis to misbranders and adulterators of foods.

M. A. LEE, Superior, Wis.

After-Effects of Athletics

To the Editor:—As an old hygienist, I was delighted with your editorial "Muscular Development and Physical Exercise" in THE JOURNAL (March 9, p. 703). People are beginning to pay some attention to what concerns them most, viz., their health; and scientific publications, not to mention the daily papers, are cheerfully giving more and more space to this, the most important of all topics. I want to commend highly your demand that the physical education of children shall be undertaken and carried out with the same care and attention that is devoted to the intellectual side of their development. Perhaps we shall hark back to the fine old formula by which the ancient Greeks regulated the education of children. They divided the time spent on it each day into three equal periods, which were taken up with study, exercise (including games and contests) and music, with the result that they produced men and women whose equals physically and intellectually the world has not seen since. While I heartily approve of the editorial and the fair and scientific spirit in which it was written, I want to call attention to one small portion of it which may mislead some of your readers. I refer to the reference to the "report of the Surgeon-General of the Army" (which, by the way, is an evident misprint, the report of the Surgeon-General of the Navy being meant). I read this report with marked disapproval some time ago and am sorry to note that so excellent a journal as yours appears to have been misled by the statements it contained. As I remember General Stokes' report it was a case of special pleading and presentation of one side only in support of his presumed prejudice against athletic sports. For instance, the report says "The prolonged rigorous course of physical exercises necessary to excellence in physical sports is believed to be dangerous in its after-effects on those who indulge." Such statements are not proof of anything; what is wanted is the truth proved and established by scientifically ascertained facts. The report goes on and gives some figures showing the disabilities, deaths, retirements and so on, of officers who had indulged in athletic sports while at the naval academy. These are not contrasted with similar figures deduced from the records of non-athletes, at least not in the extracts of the report which I have; but even if the subsequent life-histories of the non-athletes had been given and had proved, in some or all respects, more favorable than those of the athletes, they would by no means prove anything in regard to the desirability of athletic exercise for students, unless we know the subsequent habits of both classes of men. Many ex-athletes possessed of what is called "the insolence of health" fall early victims to diabetes, Bright's disease, arteriosclerosis and the other diseases of gluttony, intemperance and venery.

In my ten years in the Army I found that the strong and athletic officers were more apt to be dissipated than their weaker and more domestically inclined colleagues. The dull routine of garrison life was more irksome to the strong and enterprising than to the weak and undeveloped. It was commonly understood that the best fighters and most gallant officers were apt to be the freest livers and the hardest drinkers. The dull life on shipboard must have a similar effect, and the athletic men are perhaps the more dissipated. No one can keep well long and lead an improper life. Consequently, until we know what sort of men the Surgeon-General of the Navy is writing about, his report is of little scientific value.

The reports of Dr. Anderson of Yale and Dr. Sargent of Harvard tell quite a different story. College graduates being, let us assume, less prone to alcohol and venery in excess than naval officers as a class, are distinctly benefited in after life by athletic exercises in college as the reports of their physical directors show. I am not defending athletic contests. I am merely arguing from what I know and have seen to be true. If football and rowing are hurting our young men and cutting them off prematurely let these sports be stopped at once. But let us not judge such an important question on hearsay or one-sided testimony.

Indeed, the obvious means of settling some of these questions at the present moment is a thorough, careful and unbiased investigation of the entire life-history of athletes of all sorts and degrees. In this way probably the questions which still harass us regarding the ultimate fate of the strong youth could be solved and certain definite rules of life and conduct, not to mention regulations for the physical education of children, might be evolved.

Is not this matter quite as important and quite as worthy of the attention of an enlightened people as investigations of the money trust, the boll weevil, hog cholera and similar topics on which our government cheerfully spends millions whenever sufficiently urged to do so?

RICHARD COLE NEWTON, Montclair, N. J.

Sunlight in Therapeutics

To the Editor:—It will be remembered that some ten years ago the Boulder Lodge Sanitarium followed up Finsen's work with sunlight and, particularly, demonstrated the great depths to which the chemical rays of light could be made to penetrate. Subsequently we used the light in the treatment of pulmonary tuberculosis. In following Finsen's experiments some peculiar effects have been noted on the properties of sunlight to which attention has not yet been called.

Direct sunlight falling on the nude body produces erythema solare, marked by extreme redness, swelling and great tenderness, with subsequent peeling of the skin. There is some tendency to the formation of blisters on the surface. Sunlight, concentrated by large reflecting mirrors and passed through blue glass, thus securing the maximum effect of the chemical rays, shows a very great tendency to blister the skin, but there is little redness and swelling and practically no pain. Focusing direct sunlight through a convex lens of plain glass produces destruction of the skin and, if used with great intensity, gases form beneath the outer layers of the skin and small explosions occur. This method of using is very efficacious in the removal of warts, superficial moles and small non-malignant growths.

If the light be reflected by a concave mirror and thus be focused, the formation of gases has not been noted, even though used with great intensity. Blistering is thus readily produced. If, after the light is focused in either of the two ways last mentioned, it be passed through blue glass before falling on the skin, blistering is produced without destruction of the deeper layers of the skin. Formerly we used these

various methods in the treatment of lupus and other lesions of the skin but they have all given place to the following: At one time, being unable to obtain plain blue glass in the local market, we substituted a wavy, opalescent glass instead, and we found that after the sunlight was reflected with a large condensing mirror, 10 feet in diameter, and passed through the opalescent glass, neither blistering nor destruction of the skin took place, but a blanching, as in frozen specimens, occurred. The light used in this manner is very effective in lupus and in vascular nevi, even of very large extent.

Just what the properties of the light may be that effect these various results has not been determined. It would appear, however, that some of the rays are absorbed by the reflecting mirror and others by the variously colored glasses. The wavy glass transmits the light in an irregular manner and produces results widely different, and more effective, in the class of cases mentioned, from the glass with even surface.

J. W. KIME, Fort Dodge, Ia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SELF-TREATMENT NOT WISE

To the Editor:—Please inform me, under Queries and Minor Notes, as to the proper course to follow. Having had hydrocele for the past ten years, and having had this tapped several times, I was operated on and the sac removed. Before the operation the testicle was swollen to twice its normal size. An abscess of the testicle was found at the time of the operation and was removed, as I desired to take a chance of its turning out all right. Since the operation the swelling has gone down somewhat, but there are severe pains in it at times. Is there any course open now to bring it to its normal condition without loss of the testicle?

Kindly publish formula to apply on same in the reduction of the swollen testicle. Not being one of the profession and not knowing the medical terms to use herein, but being a constant reader of THE JOURNAL, I take this liberty to gain such knowledge for my own good. I have gone to considerable expense with an operation and hospital fees and do not care to seek the advice of other physicians. I thought that I might obtain such information through your valuable paper. I have no fault to find with my physician in this case, though I do not believe each one would treat the same case in the same way. A. L. X.

ANSWER.—It is not the purpose of our Queries and Minor Notes Department to take the place of a physician in his dealing with patients. When we get letters such as the above the writer is usually advised to consult a physician. Our answers are often couched in general terms, so that they may be of help to others as well as the one who writes, and almost any advice that we give needs to be interpreted, according to the local conditions, by the physician in charge of the case. We would not want to recommend anything to be used in the treatment by a patient, because a treatment which would be advisable in one case would be unsafe or unadvisable in another.

TREATMENT OF OXYURIS VERMICULARIS—DANGERS OF PHENOL ENEMAS

To the Editor:—Please give me information in regard to the treatment, prophylactic and curative, for *Oxyuris vermicularis*. The case in mind was very persistent and resisted, for ten days, quassia enemas, santonin by mouth, saline and turpentine enemas. What percentage of phenol for enemas would you advise? X. Y. Z.

ANSWER.—1. Prophylaxis: This worm lives in the large intestine, sometimes as high as the cecum, where the females probably become impregnated. Before laying their eggs, however, they descend to the rectum and emerge from the anus and deposit their eggs just outside the margin of the anus. By the irritation caused by the presence of the worms, itching and scratching are excited and the patient soils his fingers with material containing the ova. These ova, in the case of children or uncleanly adults, are transferred to the mouth and the patient is in this way self-infected. Of course, occasional infection from one patient to another may occur. Eggs may also reach the mouth on vegetables and fruit or in drinking-water. Prophylaxis therefore requires cleanliness of the perianal region and scrupulous care as to the contamination of the food or mouth after touching the irritated parts. Unguentum hydrargyri may be applied to the region of the anus. Or it may be washed with a 1-to-10,000 bichlorid solution.

2. The treatment consists in the use of santonin to poison the worms in the intestine and calomel or a saline to secure the evacuation of the worms. Locally an enema of salt solution, or of quassia infusion should be used.

3. The use of phenol in enemas is not advisable. Repeated cases of serious and even fatal poisoning have resulted from the use of phenol in this way. Convulsions and speedy death result from strong solutions but the dilute solutions are also dangerous, as the drug is rapidly absorbed and may lead to serious systemic poisoning. A tablespoonful of a 5 per cent. solution would contain 0.75 gm., 12 grains, which is nearly four times the dose that has proved fatal to a child of 8.

USE OF LATIN IN MEDICAL WRITING ABROAD

To the Editor:—In THE JOURNAL, March 2, p. 674, is the title "Attempted Abortion. (Tentamen abortus provocandi deficiente graviditate.) F. v. Neugebauer" (Warsaw). I should be much interested to know: 1. Is the whole article in Latin? 2. Is Latin frequently used to-day abroad in certain universities (or towns or specialties)? H. GRAY, Boston.

ANSWER.—1. No. Merely the title is in Latin; the article is in German.

2. Not in the medical press or publications except occasionally in titles and then mostly by writers in eastern Europe. The Latin anatomic terms for muscles, bones, nerves, etc., are universally used in medical literature abroad, and this is a great aid in eliminating chance for error in translating from the various European languages. G. Baccelli, the Italian medical statesman, professor of clinical medicine at the University of Rome, has occasionally written an address in Latin for presentation at international medical congresses, and articles for publication in a German periodical, as at the time Koch's sixtieth birthday was being celebrated.

ALCOHOLISM AND SURGERY

To the Editor:—In reply to J. H. Bush in Queries and Minor Notes (THE JOURNAL, March 9, p. 722), I would say that I did a suprapubic prostatectomy, under ether, on a man, aged 58, who had been "in the gutter" for eight or ten days out of every sixty, for years, ten to my knowledge, and who, after his recovery, was nauseated by the smell of whisky and could not be induced to take it. He was under observation for two years following his operation. I attributed his reformation to the ether debauch.

FRANK B. KISTNER, Portland, Ore.

The Public Service

Medical Department, U. S. Army

Changes for the week ended March 23, 1912.

Powell, William E., captain, March 13, designated for duty with troops to and at the Yosemite National Park, Wyoming, during the season.

Manly, Clarence J., major, March 16, sick leave of absence extended thirty days.

Wolven, F. Homer, dental surgeon, March 10, reported for temporary duty at Fort Stevens, Ore.

Davis, William R., captain, March 18, left West Point, N. Y., on thirty days' leave of absence.

Johnstone, E. K., M.R.C., March 15, reported arrival at San Francisco from Schofield Barracks, H. T., on thirty days' leave of absence.

Stone, Frank P., dental surgeon, March 20, left Fort McPherson, Ga., en route to Fort Morgan, Ala., for temporary duty.

Medical Corps, U. S. Navy

Changes for the week ended March 23, 1912.

Valz, E. V., P. A. surgeon, detached from the *South Dakota* and ordered to the *West Virginia*.

Allen, A. H., P. A. surgeon, detached from the *Washington* and ordered to the *Hannibal*.

Stuart, D. D. V., asst. surgeon, detached from the *Hannibal* and ordered to the naval hospital, Washington, D. C., for treatment.

Cuthbertson, Roy, asst. surgeon, detached from the *West Virginia* and ordered to the *South Dakota*.

Valz, E. V., P. A. surgeon, detached from the *West Virginia* and ordered to the *St. Louis*.

Halton, E. P., asst. surgeon, detached from the naval station, Marianas, and ordered to Las Animas hospital for treatment.

Cuthbertson, Roy, asst. surgeon, orders of March 8 revoked.

Butts, Heber, P. A. surgeon, detached from the naval medical school and ordered to the naval hospital, Canacao, P. I.

Wright, B. L., surgeon, detached from the *Nebraska* and ordered to the *Georgia*.

Fiske, C. N., surgeon, detached from the *Georgia* and ordered to the *Nebraska*.

Murphy, J. F., surgeon, commissioned surgeon from July, 1911.

Chambers, William, P. A. surgeon, detached from the *Glacier* and ordered home to await orders.

George, C. M., asst. surgeon, detached from the naval medical school, Washington, D. C., and ordered to the *Glacier*.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

COMBINED OFFICE AND RESIDENCE AN IDEAL PLAN

C. W. Bales, M.D.
KELSO, WASH.

Complying with the request of Dr. H. M. Ferguson[1] for plans for residence and office combined, I submit a plan of

Fig. 1.—Combined office and residence of Dr. C. W. Bales, Kelso, Wash.

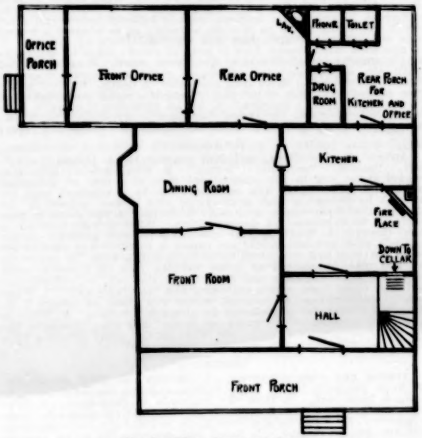

Fig. 2.—Plan of ground floor.

the ground floor of my new property which I have occupied for about eighteen months and which, as far as my experience goes, can hardly be improved on. The residence portion is 26 by 32 feet, the office rooms each being 14 feet square, the drug room and phone booth each 4 feet, the rear porch 7 feet wide, front office porch 5 feet and the front porch of residence 8 feet. After an experience of twelve years as a physician in a small country town I consider the combined office and residence ideal.

1. THE JOURNAL, Oct. 21, 1911, p. 1386; see also articles, with plans and views of houses, in THE JOURNAL, Feb. 10, 1912, p. 431; March 9, 1912, p. 728, and also next week, April 6, in the Automobile Section, pages 1055 to 1057

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Eighth Month—Second Weekly Meeting

ACUTE GASTRITIS

PATHOLOGY: (a) Catarrhal gastritis. (b) Ulcerative gastritis. (c) Membranous gastritis. (d) Corrosive gastritis.

SYMPTOMS: Usual onset. Persistence of symptoms. Physical examination. Follicular form marked by hemorrhage. Corrosive gastritis. Mouth and pharynx, pain, vomiting, collapse, intestinal symptoms. Prognosis.

TREATMENT: Gastric lavage. Medicinal treatment. Special indications in corrosive gastritis. Avoid lavage, use antidotes, bland drinks, opium.

CHRONIC GASTRIC INDIGESTION

SYMPTOMS: In Infants: Examination of stomach contents; mucus, reaction, rennet, pepsin, hydrochloric acid, fatty acids, motor function. Vomiting constant symptom; time, vomitus. Bowels. General symptoms. Course of disease.

In Older Children: Gastric and intestinal symptoms. General symptoms.

TREATMENT: Hygienic. Stomach washing; technic, results accomplished. Dietetic; wet nurse, modified milk,[1] diet of older children.

ACUTE INTESTINAL INDIGESTION

SYMPTOMS: In infants and older children. Pain, tympanites, diarrhea, constitutional symptoms. Stools; number, changes in color and character; reaction, bacteria. Course of disease.

TREATMENT: (a) Elimination. Therapeutic action of calomel, castor oil. (b) Rest. Dover's powder. (c) Dietetic.

1. Gilbert: Medical Record, Oct. 22, 1906. McAlister: Medical Record, July 11, 1908. Hare: Therapeutic Gazette, February and August, 1908. Freeman: THE JOURNAL A. M. A., Nov. 23, 1907. Clark: Am. Jour. Med. Sciences, June, 1909.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 1-2. Sec., Dr. Ancil Martin.
CALIFORNIA: San Francisco, April 2. Sec., Dr. Charles L. Tisdale, 929 Butler Building.
COLORADO: State Capitol, Denver, April 2. Sec., Dr. David A. Strickler, 612 Empire Building.
IDAHO: Boise, April 2-3. Sec., Dr. O. J. Allen, Bellevue.
ILLINOIS: Collseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.
MINNESOTA: State University, Minneapolis, April 2. Sec., Dr. W. S. Fullerton, 248 Lowry Building, St. Paul.
MONTANA: The Capitol, Helena, April 3. Sec., Dr. W. C. Riddell.
NEW MEXICO: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.
OKLAHOMA: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.
RHODE ISLAND: Room 315, State House, Providence, April 4-5. Sec., Dr. Gardner T. Swarts, State House.
UTAH: County Building, Salt Lake City, April 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.
WEST VIRGINIA: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Kansas February Report

Dr. H. A. Dykes, secretary of the Kansas Board of Medical Registration and Examination, reports the written examination held at Topeka, Feb. 13, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 9, of whom 3 passed and 6 failed. Four

candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Rush Medical College	(1911)	81
Kansas Medical College	(1910)	79
Medico-Chirurgical College, Philadelphia	(1901)	75

FAILED

University of Kansas	(1912)	..
Tufts College Medical School	(1907)	..
St. Louis College of Physicians and Surgeons	(1911, 2)	..
University of Tennessee	(1908, 2)	..

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School	(1905)	Illinois
Kentucky School of Medicine	(1878)	Indiana
University of Maryland	(1911)	Nebraska
Central Medical College, St. Joseph	(1896)	Missouri

North Dakota January Report

Dr. G. M. Williamson, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, January 2-5, 1912. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 12, of whom 9 passed and 3 failed. Three candidates were licensed through reciprocity and one was licensed under the exemption clause. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Louisville	(1910)	88.3
University of Minnesota, College of Med	(1895)* (1911)	79.9
Washington University, St. Louis	(1894)	76.8
Creighton Medical College	(1911)	82.2
New York Homeo. Medical College and Hospital	(1910)	79.4, 81.5
Marquette University, Milwaukee	(1910)	75.5
McGill University, Montreal, Quebec	(1903)	77.5

FAILED

Hamline University	(1907)	73
Ensworth Medical College	(1909)	*
Cleveland Homeopathic Medical College	(1903)	52

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Chicago	(1910)	Illinois
Chicago College of Medicine and Surgery	(1910)	Illinois
University of Minnesota, College of Medicine	(1911)	Minnesota

EXEMPTION CLAUSE

College	Year Grad.
Northwestern University Medical School	(1907)

* No grade given.

The following questions were asked:

ANATOMY

Answer any eight questions. 1. Describe the muscles that move the eyeball, giving their nerve supply. 2. Give the origin, course and distribution of the left recurrent laryngeal nerve. 3. Describe the linea aspera and name the muscles which are attached to it. 4. Describe the internal annular ligament of the ankle. Name in order the structures which pass beneath it. 5. What are the relations of the brachial artery? Name its branches. 6. Name the structures that pass through the sphenoidal fissure, and the jugular foramen. 7. Name the structures severed in an amputation of the upper third of the leg. 8. Give the origin, course and distribution of the musculo-spiral nerve. 9. Give the origin and insertion of the following muscles: biceps, deltoid, supinator longus, gracilis and popliteus. 10. Describe the position and relations of the right kidney.

PATHOLOGY

1. What are the characters of the *Bacillus typhosus?* Describe how Widal's reaction should be carried out. 2. What are the causes of intestinal obstruction? Describe malignant stricture of the colon. 3. Describe minutely the changes which take place in the kidneys in chronic interstitial nephritis and give a short account of the disturbances of the circulation of the accompanying changes in other organs which are liable to follow. 4. What are the principal tumors of bone? Describe in detail the structure of a myeloid sarcoma. 5. What are the lesions commonly met with in gonorrhea? Give an account of the organisms which cause this disease.

CHEMISTRY

1. What is chemical affinity? 2. Define (a) gravitation, (b) porosity, (c) osmosis, (d) cohesion, (e) diffusion. 3. Mention the halogens. Why are they so called? Give the formula of three compounds each of which will contain a different halogen. 4. What is the range of the specific gravity of normal urine? State what diseased conditions produce (a) an abnormal high specific gravity of urine; (b) a low specific gravity of urine. 5. Give the chemical reaction of (a) saliva, (b) gastric juice, (c) tears, (d) bile, (e) blood. 6. Give the symbols of antimony, silver, gold, iron and zinc. 7. Give the treatment of carbolic acid poisoning. 8. Mention the secretion of the body that contains (a) cholesterin, (b) pepsin, (c) trypsin, (d) casein, (e) bilirubin.

PHYSIOLOGY

1. How would digestion be affected were the ductus communis choledochus obstructed? 2. Explain the physiologic circuit essential to a reflex action. 3. Describe (a) the normal pulse, (b) state the factors active in the maintenance and give average rate in infancy, youth and adult age. 4. What is the relation of the capillaries to the circulation? 5. Describe the process of osmosis and give an example in the human economy. 6. What kind of food would you recommend in cases of obesity? And why? 7. Name the ductless glands. 8. What is the effect of an excessive meat diet?

HISTOLOGY

1. Give the structure of mucous membrane. 2. Describe the uterus. 3. Give the histology of endothelium. State where it is found. 4. Give the structure of lung tissue. 5. Describe the development of bone.

BACTERIOLOGY

1. Give the classification of bacteria as to form, and give an example of each class. 2. Name five culture media. 3. What is phagocytosis? Is it of any importance? And why? 4. How do we determine whether a certain organism is or is not pathogenic? 5. Why do we stain bacteria? Describe a method of examining sputum supposed to contain tubercle bacilli.

PREVENTIVE MEDICINE

1. By what means may typhoid be contracted, and what methods would you adopt to prevent its spread? 2. Give your plan of handling a case of tuberculosis in a poor family. 3. What is impetigo, what parts are usually affected, and how prevent it? 4. Name all the diseases subject to quarantine in this state, and length of time for each. 5. What is ophthalmia neonatorum? What precautions must be taken in this disease? 6. How would you manage a case of diphtheria in a large family, with a view to prevent further cases developing? 7. Give the symptoms and diagnosis of small-pox, and your method of disinfecting the patient on his recovery and the house he occupied. 8. Differentiate between infectious and contagious diseases. How would you class pneumonia? What effect does cold have on the causation of this disease?

SURGERY

1. Give different varieties of dislocation of the hip-joint and describe method of reduction of one. How would you diagnose dislocation of the hip from fracture of the surgical neck of the femur? 2. Give differential diagnosis of gall-stones, duodenal ulcer, gastric ulcer and gastric cancer. 3. Give symptoms and treatment of acute osteomyelitis. 4. Describe your treatment of a case of talipes equinovarus in a patient 2 years of age. 5. What is cardiospasm? Give symptoms. How would you diagnose it from malignant disease? 6. Define hernia. Give different varieties of abdominal hernia. What are the symptoms of strangulation? 7. Give diagnostic points of hydrocele and describe fully different methods of treatment. 8. Define Meckel's diverticulum, Ludwig's angina, genu valgum, paraphimosis, embolus, thrombus.

MEDICAL JURISPRUDENCE

Answer five questions, including numbers 1 and 8. 1. How is the right acquired to practice medicine and surgery in this state? 2. Can an otherwise qualified physician without a license sue and recover for medical services, in this state? 3. What degree of skill is required by law of a medical practitioner? 4. State briefly the difference in appearance between wounds inflicted before and after death. 5. Being called on in court to testify as to whether a wound was self inflicted or not, state how you would form an opinion. 6. A new-born infant found dead in heap of ashes; ashes in esophagus and stomach; mouth and nose filled with mucus; lungs distended with air, emphysematous; subpleural ecchymoses; fluid blood in heart. Give opinion as to time and cause of death. 7. How would you determine in case of gunshot wound if weapon was discharged near at hand or at a distance? 8. Give a definition of insanity from a medicolegal view. 9. Define "delusion," "illusion," "hallucination." 10. When is the induction of abortion justifiable and legal?

TOXICOLOGY

Answer five questions, including number 1. 1. Define "toxicology," "poison," "antidote," "lethal." 2. What general principles would guide you in the professional care of a case of poisoning where the toxic agent was unknown? 3. In a criminal trial for murder by poisoning with hydrocyanic acid it was claimed by the defense that hydrocyanic acid could be formed in the stomach, post mortem, as a product of decomposition. What is your opinion of that theory? 4. What, in your opinion, is the best antidote against carbolic acid, and how would you expect it to act? 5. A man, to see a patient who had swallowed water from a dish with "fly paper" in it, and who complained of severe burning pain in stomach, what would be your diagnosis and what would you do? 6. Differentiate between coma from opium poisoning and from apoplexy. 7. What official preparations of mercury would you class as irritant poisons? 8. Describe a test for phosphorus in stomach contents. 9. What is the usual toxic agent in "knock-out drops" and what symptoms are produced by a lethal dose? 10. What is the usual duration of a fatal case of poisoning by aconite?

OBSTETRICS

Answer any eight questions. 1. Describe the fetal circulation. 2. Name the germ layers of the embryo and the tissues and organs formed from each. 3. Give the diagnosis of pregnancy. 4. Give the indications for and methods of terminating pregnancy prematurely. 5. Conduct a normal L. O. A. 6. Give the indications for the use of forceps. 7. Name and describe the germs causing puerperal infection. 8. Eclampsia: ethology, pathology and treatment. 9. Give the care of the new-born child. What is required by the law of our state of the physician attending a case of labor?

GYNECOLOGY AND DISEASES OF CHILDREN

1. Describe the operation of uterine curettage and give indications for its performance. 2. Gonorrheal vaginitis: give cause, symptoms, physical findings and treatment. 3. Name two operative procedures for correction of retrodisplacements of the uterus. Describe one of them. 4. What are the causes and symptoms of prolapsus uteri? What operative procedures may be performed to correct such condition? 5. Otitis media: give causes, symptoms, diagnosis and complications. What means would you employ to prevent com-

V. 5
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plications? 6. Define cholera infantum. Give etiology, course and prophylaxis. 7. Give the best substitute for mother's milk and describe in detail its administration.

PHYSICAL DIAGNOSIS

1. Give the etiology and the symptoms and describe briefly the course of an ordinary case of lobar pneumonia. 2. Give the etiology and the symptoms of acute glaucoma. 3. Name and describe briefly the standard methods used in physical diagnosis. 4. Describe the regions of the chest wall and name briefly the viscera within the contained areas. 5. Give the differential diagnosis between pericarditis and endocarditis. 6. Give the etiology, the symptoms and the physical findings of aortic regurgitation. 7. (a) Give the etiology and the symptoms of locomotor ataxia. (b) What would be your procedure for the prevention of this disease? 8. Give the differential diagnosis between multiple neuritis and poliomyelitis. 9. Give the etiology, the symptoms and the clinical findings of bronchial asthma. 10. Give the etiology, the stigmata and the accidents of hysteria.

Indiana January Report

Dr. W. T. Gott, secretary of the Indiana Board of Medical Registration and Examination, reports the written examination held at Indianapolis, January 9-11, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 23, of whom 20 passed, including 1 osteopath and 3 failed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Denver and Gross College of Medicine	(1904)	79.6
Northwestern University Medical School	(1911)	89.3
College of Physicians and Surgeons, Chicago	(1911)	90.8
Chicago College of Medicine and Surgery	(1911)	79.7
Medical College of Indiana	(1903)	87.1
Indiana University	(1911)	77.5
University of Louisville (1910) 79.6; (1911) 75, 76.4, 78.8.		
Harvard Medical School	(1910)	82.2
Beaumont Hospital Medical College	(1892)	89
Eclectic Medical College, Cincinnati	(1911)	78.1
Woman's Medical College of Pennsylvania	(1909)	90.6
Medico-Chirurgical College of Philadelphia	(1910)	80.9
Jefferson Medical College	(1910) 91.5; (1911)	89.7
Meharry Medical College	(1910)	78
Royal College of Phys. and Surgs., Dublin, Ireland	(1906)	85.6

FAILED		
Central College of Physicians and Surgeons	(1905)	68.1
University of Louisville	(1908)	60.9
Louisville National Medical College	(1910)	64.6

Oklahoma January Report

Dr. John W. Duke, secretary of the Oklahoma State Board of Medical Examiners, reports the written examination held at Oklahoma City, January 9-11, 1912. The number of subjects examined in was 12; total number of questions asked, 100; percentage required to pass, 70. The total number of candidates examined was 24, of whom 15 passed and 9 failed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Southern University, Greensboro	(1874)	73.6
University of Arkansas	(1909)	77.9
Rush Medical College	(1901)	86
University of Louisville	(1879) 79.8; (1892)	74.6
Hospital College of Medicine, Louisville	(1896)	86
St. Louis College of Physicians and Surgeons	(1911)	75
University Medical College, Kansas City	(1906)	78.9
Long Island College Hospital	(1876)	76.8
New York University Medical College	(1889)	73.7
University of the South	(1909)	75.8
University of Nashville	(1910)	89
Memphis Hospital Medical College	(1911)	70.7, 76
University of Virginia	(1892)	93

FAILED		
College of Physicians and Surgeons, Little Rock	(1911)	67.6
Howard University, Washington, D. C.	(1891)	67
Flint Medical College	(1910	*71
Meharry Medical College	(1898) 65.9; (1910)	*75
Memphis Hospital Medical College	(1909) 60; (1911)	61
University of West Tennessee	(1907) 65.8; (1911)	*70.5

* Fell below 50 per cent. in one or more branches.

Iowa January Reciprocity Report

Dr. Guilford H. Sumner, secretary of the Iowa State Board of Medical Examiners, reports that at the meeting held at Des Moines, January 10-12, 1912, twelve candidates were licensed through reciprocity. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Georgia	(1907)	Georgia
Rush Medical College	(1906)	Illinois
Hahnemann Med. College and Hospital, Chicago	(1911)	Illinois
Northwestern University Medical School	(1910)	Illinois
Chicago College of Medicine and Surgery	(1907) (1911)	Illinois
St. Louis University	(1906)	Illinois
Washington University, St. Louis	(1903)	Illinois
University Medical College, Kansas City	(1910)	Missouri
Barnes Medical College	(1909)	Illinois
St. Louis College of Physicians and Surgeons	(1908)	Missouri
University of Nebraska	(1911)	Nebraska

New Hampshire January Report

Mr. H. C. Morrison, Regent of the New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, January 9-10, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 20, of whom 17 passed and 3 failed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Baltimore Medical College	(1908)	75
Medical School of Maine	(1910)	83
Harvard Medical School	(1906) 85; (1907) 84; (1910)	78
Tufts College Med. School	(1908) 80; (1910) 78; (1911)	86
Boston University	(1899) 89; (1911)	89
Woman's Medical College of Pennsylvania	(1908)	77
Jefferson Medical College	(1909)	80
University of Vermont	(1908) 75; (1910)	82
Laval University, Montreal, Quebec	(1911)	76
University of Athens, Greece	(1908) 75; (1911)	77

FAILED		
Baltimore Medical College	(1909)	65
Dartmouth Medical School	(1910)	70
University of Athens, Greece	(1899)	60

South Dakota January Report

Dr. L. G. Hill, secretary of the South Dakota State Board of Medical Examiners, reports the written examination held at Huron, January 10-11. The number of subjects examined in was 13; total number of questions asked, 125; percentage required to pass, 75. The total number of candidates examined was 6, all of whom passed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Northwestern University Medical School	(1908)	86.3
Drake University	(1910)	82
Woman's Medical College of Baltimore	(1892)	75
University of Pennsylvania	(1902)	94.3
Hahnemann Med. Coll. and Hosp., Philadelphia	(1911)	87.3
Jefferson Medical College	(1901)	80.7

Vermont January Report

Dr. W. Scott Nay, secretary of the Vermont State Board of Medical Registration, reports the written examination held at Montpelier, January 9-11, 1912. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The number of candidates examined was 7, of whom 6 passed and 1 failed. The certificate of one candidate is withheld pending the securing of his diploma. Six candidates were licensed through reciprocity. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Harvard Medical School	(1909)	89
Columbia University, College of Phys. and Surgs.	(1907)	88.7
Medico-Chirurgical College of Philadelphia	(1910)	88.8
University of Vermont	(1904) 77.4; (1911)	83.6

FAILED		
Baltimore Medical College	(1911)	69.9

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Johns Hopkins University	(1911)	New Hamp.
Baltimore Medical College	(1901)	W. Virginia
Harvard Medical School	(1909)	New Hamp.
Dartmouth Medical School	(1909)	New Hamp.
Long Island College Hospital	(1910)	New Jersey
University of Vermont	(1908)	New Hamp.

Book Notices

AN ARMY OFFICER ON LEAVE IN JAPAN. Including a Sketch of Manila and Environment, Philippine Insurrection of 1896-7, Dewey's Battle of Manila Bay and a Description of Formosa. By L. Mervin Maus, Colonel, United States Army. Cloth. Price, $1.50 net. Pp. 413, with illustrations. Chicago: A. C. McClurg & Co., 1911.

This book gives an account of the visit of the author to Japan and includes not only much useful information concerning the country and its institutions, points of interest, roads, routes and cost of travel, constituting a guide to the land of cherry blossoms, but also chapters on interesting periods of Japanese history, including the Russo-Japanese war. Much of the story of the book is supposed to be related by the two traveling companions of the visitor to Japan, the judge and the major, but this feature does not add materially to the interest of an otherwise entertaining book. There are numerous half-tone illustrations, and an appendix giving details of trips and cost of travel to Hawaii, Japan, China and the Philippines.

CLINICAL DIAGNOSIS. A Manual of Laboratory Methods. By James Campbell Todd, Ph.B., M.D., Professor of Pathology, University of Colorado. Second Edition. Cloth. Price, $2.25 net. Pp. 469, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

This second edition has been brought fairly well up to date by the inclusion of some of the newer and better diagnostic methods. Thus, among other insertions, are found the antiformin method for tubercle bacilli, the formalin test for ammonia in urine, Benedict's test for sugar in the urine, Wright and Kinnicutt's method of counting the blood-plates, and a satisfactory, though brief, discussion of the Wassermann reaction. While these important additions have increased the value of the work, certain omissions have been noted, which should not have occurred. Thus, no mention is made of the phenolsulphonephthalein test for the functional activity of the kidney, the best of all tests for this purpose. Further, Todd advises the quantitative estimation of the chlorids, phosphates and sulphates of the urine by centrifugal methods. These are very inaccurate and have no value in the only place in which such determinations have a place, namely, in metabolic work. Also the method of determining urea is the old inaccurate one of Doremus, which is not to be relied on when urea is to be estimated with any idea of a reliable result. The use of the old von Fleischl hemoglobinometer is advised. This should be entirely replaced by the Miescher modification or cut out entirely, as the Sahli and the Dare instruments, both of which Todd discusses, are far more reliable.

The above criticisms are not made with the idea of depreciating the value of the book, but rather with the end in view of making it a better guide. The methods given are those which have been found reliable and the brief interpretation of results is, in the main, adequate. The style is clear and concise, and the illustrations are satisfactory. The book is to be commended, especially to the student and practitioner, as one which can be followed with entire assurance of reliable results.

THE WAY WITH THE NERVES. Letters to a Neurologist on Various Modern Nervous Ailments, Real and Fancied, with Replies Thereto Telling of Their Nature and Treatment. By Joseph Collins, Physician to the Neurological Institute of New York. Cloth. Price, $1.50. Pp. 313. New York: G. P. Putnam's Sons, 1911.

Though it is still a mooted question whether the laity should be instructed in matters medical, yet of all books written for the public we know of none which sacrifices truth to epigram so little as this handy volume. In it the author's views are popularized in the form of answers written to patients' letters. The letters and answers are patterned after Oppenheim's letters to his patients. Collins' replies to his patients combine accuracy and charm of expression; in respect to the latter they remind one very strongly of Hamerton's "Intellectual Life." What he tells his patients is exactly what an experienced neurologist should say. It is quite doubtful, however, if the average patient will understand him. It appears certain that the general practitioner will learn much by a perusal of these letters; not only will they teach him what to say to his own patients, but they will also impress him with the importance of some elementary facts he himself should but may not know.

MINOR SURGERY. By Leonard A. Bidwell, F.R.C.S., Surgeon to the West London Hospital. Cloth. Price, $2. Pp. 265, with 88 illustrations. London: University of London Press, 1911.

This volume of the series of London Practitioners' Manuals deals with the various topics of minor surgery clearly and the personal element is evident. This is a good point, as the author states what he believes to be right, and does not give the ideas of various authors, leaving the reader to draw his own conclusions, without any idea as to the author's preference. Many of the illustrations are, as usual, of instruments and appliances from cuts furnished by instrument-makers. As an example of bookmaking, the volume does not do credit to the University of London Press. It is very flimsily bound and printed on paper so heavy and thick as to make the book cumbersome.

ANESTHESIA AND ANALGESIA. By J. D. Mortimer, M.B. (Lond.), F.R.C.S. (Eng.), Anesthetist, Royal Waterloo Hospital. Cloth. Price, $2. Pp. 276. London: University of London Press, 1911.

The work is eminently practical, and deals with modern methods, but does not take up the nitrous oxid-ether anesthesia. The chapter on the medicolegal position of the anesthetist deals with these important questions clearly and succinctly and is one of the most valuable sections of the work. With reference to binding and paper the book is subject to the same criticism as that made on the volume reviewed above.

CHEMISTRY OF FOOD AND NUTRITION. By Henry C. Sherman, Ph.D., Professor in Columbia University. Cloth. Price, $1.50 net. Pp. 355. New York: The Macmillan Co., 1911.

This book, the author says, is the outgrowth of several years' experience in teaching to collegiate and technical students, the subject with which it deals. Its purpose is "to present the principles of the chemistry of food and nutrition with special reference to the food requirements of man and the considerations which should underlie our judgment of the nutritive values of food." As such, it discusses food, chiefly in its nutritive relations, and does not deal with individual foods in detail. For the field it is intended to cover, the book is an excellent one. The principal foodstuffs and the ways and methods by which they become available, their functions in the tissues and their ultimate metabolic fate are first described. Then are given the methods first, of determining the food requirements of the body under varying conditions, and second, of ascertaining "the functions of the individual chemical elements in nutrition and the quantities in which they should be supplied by the food." Finally, the author considers the criteria by which the nutritive value and economy of various foodstuffs should be judged. Three useful tables are given in the appendix in which lists of foods are given showing, respectively, first, the edible organic nutrients and fuel values; second, the ash constituents as percentages of the edible portion, and third, the ash constituents in grains per 100 calories of the edible portion.

JAHRESBERICHT ÜBER DIE KÖNIGLICHE PSYCHIATRISCHE KLINIK IN MÜNCHEN FÜR 1908 UND 1909. Paper. Price, 3.60 marks. Pp. 187. Munich: J. F. Lehmann, 1911.

Rarely is an annual report sufficiently meritorious to deserve a review, most of them being dry recitals of figures of admission of patients, etc. This one emanating from the great psychiatric clinic in Munich deserves special commendation. Very interesting and particularly full from the scientific point of view are the reports on the medicolegal cases, the alcoholic psychoses, and the results of microscopic examinations.

FORTSCHRITTE DER NATURWISSENSCHAFTLICHEN FORSCHUNG. Von Prof. Dr. E. Abderhalden, Berlin. Dritter Band. Paper. Price, 16 marks. Pp. 352, with 136 illustrations. Vienna: Urban & Schwarzenberg, 1911.

Of the several scientific articles contained in this volume two are of especial interest to physicians, namely, the one on heredity by Prof. Dr. W. Johannsen, and the article on the origin and acquisition of human characteristics, by Prof. Dr. Hermann Klaatsch. The article on heredity is particularly valuable, as it gives a complete summary of the work done to date in a very lucid and easily comprehended style. Professor Klaatsch's article deals with the beginning of the human hand, and also constitutes interesting reading.

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SERUM DIAGNOSIS OF SYPHILIS AND THE BUTYRIC ACID TEST FOR SYPHILIS. By Hideyo Noguchi, M.D., M.Sc., Associate Member of the Rockefeller Institute for Medical Research, New York. Cloth. Price, $2.50. Pp. 238. Philadelphia: J. B. Lippincott Co., 1911.

This edition of Noguchi's book is a restatement of the method and results which he published in the first edition. It is valuable as giving his latest views on the subject, but contains no very important additions. The chief addition is a study of the effect of treatment on the serum-test of syphilis, which is interesting especially because of the use of a quantitative estimation of the strength of the reaction. He makes one surprising statement to the effect that relapses after one dose of salvarsan are comparatively few.

Noguchi is still a most enthusiastic believer in the simplicity and practicability of his test. He maintains vigorously that the carrying out of the test does not require especial training. That this is so—that the Noguchi system materially reduces the difficulties of the serum-test—is far from evident, even from his own description of it. His idea, in this connection, that the preparation of materials by competent laboratory workers in fairly stable form simplifies the work sufficiently for the practitioner to do it reliably for himself, he himself disproves by stating, on page 52, that "the performer of the test should, however, know how to determine the reliability of the reagents he secures from others." If the practitioner is in position to do this, he need go little further in order to prepare his own materials and do the original Wassermann. Time, indeed, is not advancing the position either of the Noguchi or the other substitutes for the original Wassermann system. The original has signally established its reliability in comparison with all radical modifications, and if experience has shown anything, it is that the test is worthy of expert and painfully careful performance. Otherwise it is unreliable; and an unreliable test for syphilis is worse than none.

ÜEBER NEURORECIDIVE NACH SALVARSAN- UND NACH QUECKSILBERBEHANDLUNG. Ein Beitrag zur Lehre von der Frühsyphilis des Gehirns. Von Dr. J. Benario. Mit einem Vorwort von Wirkl. Geheimen Rat P. Ehrlich. Paper. Price, 6 marks. Pp. 195, with illustrations. Munich: J. F. Lehmann. 1911.

This work of Benario's is a piece of special pleading in behalf of salvarsan, its object being to show that the disquieting, not to say alarming, accidents to the nervous system arising in connection with the use of salvarsan are due to syphilis and not to salvarsan. His method of procedure is to collect the "neurorecidives" occurring under mercurial treatment reported in the literature and set them over against the nerve disturbances reported following salvarsan. The result is not convincing as regards the harmlessness of salvarsan to the nervous system, but it is a monument of laborious defense and of fidelity to the cause of salvarsan.

Benario, with painstaking thoroughness, defends salvarsan from the charge that it causes toxic injury to the central nervous system either directly or by causing a lessened resistance in these nervous structures to the attack of the *Spirochæta pallida*. By comparing case histories of 122 patients treated with mercury with 177 treated with salvarsan, all having luetic lesions of the central nervous system during the early secondary stage, he seeks to prove that salvarsan is not followed by these lesions any oftener than is other treatment, but simply that the cases have not been reported—a line of argument that is not very conclusive. More convincing is the chapter on pathology, explaining why the basis cerebri and especially the auditory and optic nerves are most often involved.

The neurorecidives occurring after mercury or salvarsan are attributed wholly to non-energetic treatment, such as the usual single dose of salvarsan of 0.4 to 0.6 gm. The author makes the surprising statement that treatment of lues with moderate doses of salvarsan is more favorable to the occurrence of neurorecidives than very small doses or none at all. He recommends, without a thought of danger, three doses of 0.4 to 0.6 gm. salvarsan, intravenously, at intervals of from five to eight days. That these are not wholly without danger no one who has followed the literature of salvarsan can doubt. He attempts to explain away the frequent severe febrile reactions after salvarsan as the result of absorption of some unknown dead organic material collecting in the distilled water which is used—an explanation that forces the conclusion that he is hard pressed for any explanation.

One can readily approve the warning to all physicians to be on the lookout for early meningeal symptoms and to use the serum-test on both blood and spinal fluid and to make a microscopic examination of spinal fluid more often in diagnosis and in watching the progress under treatment, but one cannot so readily accept his thesis that the early secondary neurorecidives, which have been so strikingly frequent since the advent of salvarsan, are simply a common phenomenon of syphilis which has not been recorded heretofore.

The very last case-report in the book is an excellent illustration of the author's peculiar mental attitude. A 39-year-old man, two months after his initial lesion, received 0.4 gm. salvarsan intravenously, on April 15, 1911, for a marked papular eruption. Two days later headache, dizziness and ringing in the ears set in and persisted. These were regarded as syphilitic, and on May 6—nineteen days later—he was given salvarsan, 0.5 gm. intravenously. The following day the symptoms began to grow worse until, in six or seven days, paresis of the auditory, oculomotor and facial nerves occurred, with bilateral optic neuritis and great disturbance of vision. This is a typical example of the case histories that have caused a good many to take a conservative view of the indications for salvarsan, yet the author finds nothing in it worthy of especial comment. To those energetic enough to attempt its polyglot difficulties (for there are no less than seven languages represented in its pages) the book is an interesting contribution to the literature of syphilis.

PAIN. Its Causation and Diagnostic Significance in Internal Diseases. By Dr. Rudolph Schmidt, Physician to the Royal Empress Elizabeth Hospital, Vienna. Translated and Edited from the Second Enlarged and Revised German Edition by Karl M. Vogel, M.D., Assistant Professor of Clinical Pathology, College of Physicians and Surgeons, Columbia University, and Hans Zinsser, A.M., M.D., Professor of Bacteriology, Leland Stanford Junior University. Second Edition. Cloth. Price, $3. Pp. 358. Philadelphia: J. B. Lippincott Co., 1911.

The correct interpretation of pain, either that which occurs spontaneously and is complained of by the patient, or that which is manifested only on careful objective examination, is one of the most difficult yet important tasks imposed on the physician. The value of pain as an early indicator of disease and as evidence of the progress of disease is well known to both physician and layman. The difficulty of correctly interpreting pain is, however, properly appreciated only by physicians, and particularly by such physicians as check up on their diagnoses by careful study of the later histories of their patients, with, where possible, the revelations of autopsy. Schmidt has had an ample clinical material at his command, has controlled many diagnoses by autopsy, and has profited by the traditions and examples of such masters of diagnostic detail as Bamberger and Neusser. In this book, therefore, we find a discussion of pain that goes into minutiæ. This critical analysis of details is the main feature of the work. Features apparently trifling are often shown to be of prime significance. In fact, this emphasis laid on minor manifestations may easily lead the reader—and perhaps it occasionally does the author—away from the major facts of the common type of pain. There is at times almost an overrefinement of diagnosis. The scope of the book may be gathered from the chapter headings, which include such subjects as the sensation of pain, the functional modification of pain, topography in its relation to pain, quality and time of occurrence. Then follow chapters dealing with pain in diseases of the nervous system, the organs of motion, the digestive system, the urinary system and spleen, respiratory and circulatory systems. A chapter on cutaneous tenderness in visceral disease, based on Head's researches on referred pain, has been added by the translators. The chapter dealing with pain in diseases of the digestive system is particularly full. The book must be consulted before one can appreciate the large amount of painstaking labor that has gone into its preparation. It is full of suggestive and helpful hints for the practitioner, and if rightly used, will be of great service in solving some of the knotty problems presented to the physician and surgeon. The work of translation has been well done.

Miscellany

The Surgeon's Dilemma

Under this caption there appeared recently in the *Oregonian* (Portland) an editorial which we cannot resist quoting in full:

"This risk which surgeons often run in performing their duties to their patients is illustrated by two recent incidents. The first occurred in this country. A woman engaged a surgeon to operate on her for appendicitis. When the necessary incision had been made it appeared that there were other troubles which required more extensive use of the knife. The surgeon did what the case demanded and the woman recovered. To show her gratitude to the man who had saved her life she sued him for $10,000 damages. Happily the case was a clear one and the judge ordered a verdict in the surgeon's favor. The other incident occurred in London. The patient was a boy. He seemed to be at the point of death, but the physicians saw some chance to save his life by an operation. It was performed and he died on the table. Had he been permitted to die without an effort to save him there would have been no trouble. But because the physicians made an unusual exertion in his behalf they were brought before the coroner at an inquest and a great scandal was stirred up. Because the operation failed to save the boy's life it was assumed that the physicians were criminally rash to have tried it.

"The surgeon often finds himself between a deep ditch on one side and a quagmire on the other. If he does not operate he knows that the patient will die and his conscience will not forgive him. If he does operate the patient may still die and then the horde of enemies of medical science will set up a shriek. 'Behold another victim of the knife.' Even if the patient recovers after an unauthorized operation which saved his life the surgeon is by no means sure of his gratitude. He may be sued for damages because the patient did not order him to do what he did. Like a traveler passing through the street of a strange village, the surgeon's steps are beset by a mob of howling curs whose noise is troublesome at best and may become dangerous. The malignity of the human heart takes many curious forms, but the strangest of all is its enmity to the science and art of healing. There are people in the world who hate a physician much worse than they do a burglar. It sometimes seems as if all the old *odium theologicum* which used to be spent in battles between the sects had now gone into the fight on medical science.

"Emergencies often arise in which a surgeon is compelled to make a swift decision. If he declines to operate, death will be the unavoidable consequence. If he does operate, he imperils his reputation and subjects himself to all sorts of misrepresentation and calumny. It is a great wonder that medical men so often assume this peril when they might escape it by allowing the patient to pass quietly out of the world. Their conduct shows a degree of devotion to science and human welfare which may well excite admiration. There is hardly any other profession in which the same qualities are exhibited to anything like the same extent. As an English medical man has put the case, the surgeon is frequently in the situation of one who stands on the shore and watches a man struggling in deep water. Shall he swim to his rescue? Perhaps the struggler wants to die and interference with his plan will be resented. Perhaps the water is not nearly so deep as it appears and the man may get out alone. Perhaps a big fish will happen along and propel him ashore with his fins. While the observer stands pondering these various possibilities the unhappy struggler drowns and there is an end of the matter. Is this the way we wish our medical attendants to act when they find us in deadly peril? Or do we prefer to have them assume the responsibility of giving us all the help science suggests without waiting for strict authority to do it? If they wait for authorization we may perish when a little boldness would have saved the day. Is not boldness preferable to vacillation?

"A wise man when he employs a lawyer to conduct his case in court follows the professional man's advice implicitly. He will give all possible aid by securing evidence and looking up facts, but he will not question the lawyer's judgment. There may be better lawyers in the world. Mistakes may be made. But no matter about that. For this case the die is cast and the litigant lies quietly in the bed he has made for himself if he is a wise litigant. The same rule applies to our attitude toward medical men, only to a far greater degree. Once a doctor is chosen the patient's fate is in his hands. The issue of life and death depends on the exercise of his judgment and skill. Is not a man a fool to do or say anything which may tend to impair the doctor's skill or shake the firmness of his judgment? What we want in the moment of dire peril is absolutely unhampered courage in the surgeon to do the very best for us that he knows how. Without that courage he will debate instead of acting. He will deliberate instead of striking at the crucial instant. He will look at possible dangers to his reputation instead of seeing only the patient's danger. He will take no chances which involve risk to himself. The moment when life hangs in the balance will pass and death will gain the victory.

"This is what medical men may be brought to by petty persecution. That they have not been brought to it already speaks marvels for their character. No surgeon can always succeed. Some operations must fail. But is it not better, far better, to encourage medical men to employ the last resources of their art for the sake of their patients than it is to worry them into timid adherence to convention and precedent?"

Flies in Foreign Countries.—From the *Daily Consular and Trade Reports*, March 12, 1912, the following information is gathered, concerning the presence of flies in various countries abroad. The reports are made by the United States consuls. There are so few flies in Bavaria that they can in no way be regarded as a pest. This is due to the extreme cleanliness of Bavarian cities. Court-yards, alleys, vacant lots, etc., are kept clean. There are no quarters that could be justly called slums, even in the districts where buildings hundreds of years old are found. Garbage is collected in closed tin or zinc cans and regularly removed in closed wagons. Frankfort, Prussia, is not greatly troubled with flies. In July and August there are some, and protective measures are used in grocery-stores, butcher-shops, etc. Flies are not troublesome in Prague and screen doors are practically unknown. At St. Etienne, France, flies are very troublesome, during May, June, July and August. Rouen is troubled with flies, during June, July, August and September. In London flies are not so numerous as to be troublesome, and butchers expose meat for sale without any protection, though Liverpool reports that the summer of 1911 was exceptionally hot and dry, and there was a plague of flies and wasps. In Plymouth, England, from June to September, flies and wasps are a pest. In Melbourne, Australia, from October to March, flies are very troublesome, as they are also in Johannesburg, South Africa, during the same months. Window and door screens are not used. Nogales, Mexico, during nine months of the year, is comparatively free from flies, but as soon as the rainy season commences in the latter part of June, they are very numerous and a pest until October.

The Biochemical Problem in Bacteriology.—While it is desirable to have standard and uniform methods of describing bacterial species as leading to uniformity of methods and completeness and comparability of results, F. P. Gorham in *Science*, says that we must not become slaves to standardization and uniformity. He believes that in the attempt to follow exact procedures in the culture of bacteria some serious errors have been made. The efforts to have exact methods of preparing culture mediums in order to produce standard and uniform products, Gorham believes, have not been successful. Not only are the results obtained in different laboratories unlike, but two lots of the same medium made at different times in the same laboratory are extremely unlike when measured by the delicate physiologic properties of the organisms, which respond to the slightest chemical differences. He believes that in order to get uniform results in the study of delicate physiologic properties on which depend largely the differentiation of bacterial species, the time has come to abandon complex and variable animal and vegetable mediums

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and to substitute materials of definite chemical composition. He believes it possible to prepare a synthetic medium containing chemically pure salts on which every organism will grow well. This would give uniform results, and the physiologic properties of the organisms might thus be made the basis for the determination of the species. He believes that it is not so much the properties of the bacteria which are variable as the environment in which we attempt to study them. There is scarcely a physiologic property of the bacteria that is to-day accurately measurable on account of the variability of the mediums in which they are cultured. With the adoption of mediums of definite chemical composition for making all determinations and measurements, the physiologic characters of the bacteria will assume the importance of the morphologic characters of the higher organisms and then only shall we be able to arrive at a natural classification of bacterial species which shall express their true relationship. Slowly and laboriously the physiologic chemist is trying to work out the chemistry of protoplasm, of the proteins, such as the albumins, the peptones and the proteoses; still more light might be thrown on this important problem by the study of the growth of bacteria in simple chemical solutions or in the synthetic culture mediums. We would be able to study step by step the synthesis of protein under conditions accurately controlled and completely known, and Gorham believes that some of the most interesting biologic information lies along this path. Who would dare deny, he asks, that some day it might be possible by some such method as this to discover the secret of the very origin of life itself?

Laws Concerning Ophthalmia Neonatorum.—In view of the activity of the various associations, charitable organizations and social workers in the subject of ophthalmia neonatorum, a publication that will be of considerable interest is Public Health Bulletin 49, issued by the U. S. Public Health and Marine-Hospital Service, on this subject, giving an analysis of the laws and regulations in force in the United States in regard to ophthalmia neonatorum. J. W. Kerr, in his analysis of collected statistics on this subject, says that 25 to 40 per cent. of all blindness can be referred to this cause, and a committee of the British Medical Association found that more than one-third of those in the blind schools of Great Britain owe their defect to this disease. In the United States and Canada, in 1907, out of 240 admissions to ten schools for the blind, fifty-nine, or 24.38 per cent., were blind as a result of ophthalmia neonatorum, and in 1910, out of 351 admissions, eighty-four, or 23.9 per cent., were blind from this cause. Green has found, in Massachusetts, that the minimum morbidity-rate for this disease is 6.1 per 1,000 births. A more complete census made by Green from the practice of 173 physicians in nine cities, revealed an average morbidity-rate of 10.8 per 1,000 births. These figures, of course, apply only to the locations investigated. At the present time, twenty-four states and Porto Rico have laws concerning ophthalmia neonatorum. These laws are set out in the bulletin.

Scientific Medicine and the Rise of Cults.—It is a far cry from the science of symptoms, which found its flower in the writings of Trousseau, to the science of causes, using symptoms but incidentally, as it flowers in the writings of Osler. As the practice of medicine has gone beyond the expressions of disease into its causes, it has left the field of symptoms poorly attended. Let it be understood that the physicians have moved. People have stayed where they were. Meanwhile symptoms, like branches, have grown up more luxuriantly in this nerve-racking, self-centering, neurasthenia-engendering age than in any other time. In order to fill the field which was left when medical men moved out, several agencies have flourished. One of these is social service associated with or separate from medicine; another is Christian Science. In saying that these agencies have come into an unoccupied field I do not wish to say that their motives are the same, or that there is any kinship between them. Each developed because society abhors a vacuum. There is a field for hypnotism, suggestion, auto-suggestion, the mixed suggestion and mental training of Du Bois, the analysis and mind training of Freud, the methods of the mental healer, spiritual healer, faith healer—related methods all—as well as for the pills taken with faith. . . . There must be some basis for the growth of Christian Science and other kinds of mental healing. Among their adherents are bankers, whose minds work very accurately when it comes to business. It cannot be that, when it comes to the business of the commonwealth called the human body, they go off mentally. Among them are judges capable of weighing evidence. If some part of these teachings cannot stand the acid, other parts must, or these judges would not go on accepting. Where is the explanation? The brain dominates its sister organs in the commonwealth called the human body. It can furnish symptoms where there are none. It can exaggerate existing symptoms. It can pervert and change symptoms, so that they bear slight relation to their beginnings. It is the mind that interprets. The conclusion is justified that the mind can modify the course of disease in some measure and its symptoms in great measure. The mind cannot prevent life, influence the sex, or the structure of the child, prevent infection, annul contagion, influence organic changes in organs, or make life everlasting.—W. A. Evans, "How to Keep Well," Chicago *Tribune*.

Prevention of Vomiting from Coughing in Tuberculosis.—H. Paillard writes in the *Progrès Médical* on what he calls the emetic cough of the tuberculous—a cough which irritates the pharynx producing a reflex which may cause the meal to be thrown up immediately after it is taken. He states that this tendency to vomit can be controlled by reclining on the right side after eating, and inhaling oxygen. Reclining on the right side facilitates the evacuation of the stomach while it leaves the left diaphragm comparatively at rest. Among thirty-two patients with immobilization of the left diaphragm from relics of pleurisy, this emetic cough was present in only four in whom the diaphragm was not fastened so firmly. Fixation of the right diaphragm does not influence the occurrence of the emetic cough. Paillard instructs his tuberculous patient to have a bag of oxygen suspended close at hand, and to seize the bag and inhale a few whiffs of the oxygen if, after eating, he feels the slightest tendency to cough. The patient can eat at will without fear that he is going to vomit; he is thereby enabled to retain and utilize his food. Only a very little oxygen should be inhaled at a time. Inhalation of oxygen has been prescribed in treatment of uncontrollable vomiting of pregnancy and for the dyspepsia of chlorosis. The benefit from the oxygen in tuberculosis is said to sustain the assumption that the vomiting is a reflex from mechanical factors; the oxygen reduces to a minimum the excursions of the lungs.

Diseases Not Entities.—"We are too apt, I think," says Exham in the *British Medical Journal*, "to regard diseases as entities—things that are definite and, I had almost said, concrete, not, of course, as contrasted with abstract, but rather as things with boundaries and circumscribed; whereas disease ought to be regarded as a particular condition of the individual, due to certain agents and modified by certain conditions. And as bearing on this view I would like to direct attention to the well-established fact that particular bacilli do not always cause the same symptoms. The pneumococcus does not always cause croupous pneumonia, and we are all familiar with the protean characters of conditions due to the influenza bacillus and the *Bacillus coli*."

The Urea Sign of Yellow Fever.—F. Villuendas (*Rev. de Med. y Cir.*) calls attention to the abrupt, extreme drop in the proportion of urea excreted during the incubation of yellow fever and during the first day or two of the fever. The output of urea declines in a number of affections of the liver, but in none does it show such a sudden fall as in yellow fever. A strong point is said to be the facility with which the test can be applied by merely examining the urine for urea five or six times during the first twenty-four or thirty-six hours and recording the total output of urine. The differential value of the sign is also emphasized; negative findings are held practically to exclude yellow fever.

Medicolegal

Cruel and Inhuman Treatment of Wife—Indication of Pregnancy—Confidential Communications Where Husband Is a Physician

(Sheldon vs. Sheldon (N. Y.), 131 N. Y. S. 291)

The Second Appellate Division of the Supreme Court of New York reverses a judgment dismissing a wife's complaint asking a separation from her husband for cruel and inhuman treatment. The court says that there was no evidence offered by the defendant, but on that received the court might have found that at the time of her marriage the plaintiff was 37 years old, in perfect health, and was able to give safe delivery to a normal child. During the thirty-two months that the plaintiff resided and cohabited with the defendant her menstrual flow was interrupted and delayed nine times, being restored by the administration of drugs or the performance of operations by the defendant, who was a physician. Each of the operations was attended with considerable pain, and after one of them the plaintiff was confined to her bed for three weeks, and to the house about five weeks longer. On one occasion the defendant examined the discharge after an operation and pronounced it a "growth" of four or five weeks. There was also evidence from three witnesses that the defendant stated that he did not wish to have any children, that he and his wife were too old to have them, and that they would be only an expense.

If it was the fact that, induced by such sordid motives, the defendant deprived the plaintiff of the maternal joy so highly prized by every good woman, and if, in addition, he induced her to submit to treatment intended to produce miscarriages, and which did produce them, with the accompanying pain and suffering, by false and fraudulent statements as to the necessity therefor, judgment should have gone for the plaintiff in this case, and not for the defendant.

The defendant contended that there was no evidence that the plaintiff ever became pregnant, or that the treatment administered by him was unnecessary, or without the plaintiff's consent. Interruption of the menstrual flow might indicate pregnancy. That, taken in connection with the evidence of the defendant's admission that on one occasion the resumption thereof was accompanied with the discharge of something which he, with his experience as a physician, pronounced a "growth" of four or five weeks, called on him to establish satisfactorily that pregnancy had not taken place, or that the operations or the administering of drugs was justified by the circumstances of the case.

The plaintiff sought to prove how she came to submit to the defendant's treatment. She sought to prove statements by him to her on these various occasions, which, if accepted as true, would have warranted the court in finding that he induced her to believe that it was dangerous to her health and life to give birth to a child, that her physical condition and the condition of her womb were such that it was necessary to apply the treatment which he did, and that she only consented to such treatment because of the advice which he gave to her that it was physically dangerous for her to give birth to any child, on which advice she relied because of his professional knowledge and skill. But all conversations on the subject, and all statements made by the defendant to the plaintiff relating thereto, were excluded, on the defendant's objection that they were confidential communications between husband and wife, and that the plaintiff was incompetent to testify to the same. In so ruling the trial court erred.

All communications between husband and wife which are not had in the presence of third persons are not excluded by the statute which provides: "A husband or wife shall not be compelled or without the consent of the other, if living, allowed to disclose a confidential communication made by one to the other during marriage." That relates only to such communications as are expressly made in confidence, or such as spring out of and are induced by the marital relation, and are therefore confidential in character. It is difficult, if not impossible, to formulate a definition so comprehensive as to furnish a ready method of determining the character of every communication between husband and wife. But the communications here reviewed did not approach the border line. The acts, alleged to be cruel, were the acts of the husband. The reasons given for the medical treatment, which involved such acts, were reasons given by a physician to a patient. The sufficiency of these reasons might tend to show whether these particular acts were cruel or benign. But it was not the husband speaking to the wife, but the physician speaking to the patient. In accepting the reasons given for the treatment employed, she was relying on the professional skill of the physician, not the love and affection of the husband. As a layman, simply as a husband, he would have been unable to give her the advice which she claimed that he did. As a physician, if the circumstances warranted it, he might have given precisely the same advice to a woman not his wife. Confidential they probably were, but the marital relation had nothing to do with inspiring the confidence. The confidence was that between patient and physician only, and that confidence the plaintiff expressly waived, as she had a right to do. For error in excluding this testimony, the judgment in the defendant's favor must be reversed, and a new trial granted.

What Constitutes Impotency—Expert Evidence Required

(Bunger vs. Bunger (Kan.), 117 Pac. R. 1017)

The Supreme Court of Kansas holds that impotency, as a cause for divorce, means an incurable defect, and not every temporary or occasional incapacity, but permanent and lasting inability for copulation. The existence of such a ground for a divorce against an accused wife, susceptible, as it is, of certain determination by expert examination, to which she offers to submit, should not be decided against her unless such decision is supported by the evidence of a physician who has made such examination. The best evidence obtainable should, as in other cases, be required.

The court says that the evidence showed that the plaintiff was nearly 70 years of age and that the defendant was about 66 years of age. They were married in May, 1908, in Missouri, and lived together a little less than three months, when the plaintiff left the defendant and went to Kansas. The defendant had previously been married, and had lived with her husband 35 years, but had had no children. The plaintiff testified that during the time that he had lived with her he had made not to exceed four attempts with her, and had utterly failed by reason of some malformation or obstacle in her person. She testified directly to the contrary on all these questions and to oft-repeated acts of intercourse. On the part of the defendant, two physicians testified that she was well-developed and normal in their opinions, and that they had each made a physical examination of her. In rebuttal the plaintiff offered the evidence of two physicians, who said that they had never seen the defendant, but testified in substance that the examinations and the methods of the examinations testified to by the physicians for the defendant were not such as to properly disclose whether or not the defendant was normally developed.

The plaintiff obtained a judgment; but that is reversed, and a new trial ordered, with directions that the plaintiff deposit with the clerk of the court for the use of the defendant a sufficient sum of money to pay her transportation from her home to Kansas and return, also to pay a competent, impartial physician, to be appointed by the court, for the purpose of making a physical examination of the defendant as to the matter in controversy. She had offered to submit to an examination by any physician or physicians that might be selected by the plaintiff or his attorney. There was no expert evidence of her impotency, and the testimony of the plaintiff was not sufficient, giving it full credence, to prove impotency as defined by legal authorities. If it could be said that his evidence was sufficient to establish the fact that at the times testified to by him there was incapacity on the part of the defendant and not on his part, still there was an utter failure on his part to prove whether it was a temporary and curable inability or permanent and incurable. It devolved on him to prove the latter.

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Presumption of Sanity and Burden of Proof in Homicide Cases

(Adair vs. State (Okla.), 118 Pac. R. 416)

The Criminal Court of Appeals of Oklahoma holds that, sanity being the normal and usual condition of mankind, the law presumes that every person is sane; hence the state in a criminal prosecution may rely on such presumption without proof relative thereto. But when the defendant in a homicide case produces sufficient evidence to raise a reasonable doubt of his sanity, the law then imposes on the state the burden of establishing the sanity of the defendant, the same as any other material fact necessary to warrant a conviction; and if, on consideration of all the evidence in the case, the jury have a reasonable doubt that the defendant at the time of the commission of the act charged was mentally competent to distinguish between right and wrong, or to understand the nature of the act he was committing, he must be acquitted.

The provision of the Oklahoma statutes that "An act done by a person in a state of insanity cannot be punished as a public offense" does not in effect modify, but is supplemental to, the provision that "All persons are capable of committing crimes, except those belonging to the following classes: * * * 4. Lunatics, insane persons, and all persons of unsound mind, including persons temporarily or partially deprived of reason, on proof that at the time of committing the act charged against them they were incapable of knowing its wrongfulness." Under these provisions the test of criminal responsibility for committing an act, which is a crime under the law, is the mental capacity to distinguish between right and wrong as applied to the particular act, and to understand the nature and consequences of such act, or knowing its wrongfulness the defendant is not criminally responsible, if by reason of insanity he did not have the will and mental power to refrain from committing such act.

It cannot be denied that the defense of insanity is frequently interposed in homicide cases when all other means of avoiding conviction and escaping punishment is hopeless. For this reason, insanity as a defense is almost always viewed with distrust, and it is a popular belief that it is the last resort of desperate criminals. Injustice is thus often done to a defendant who, in the judgment of his counsel, has legitimate ground for interposing this defense, and who must therefore at the outset overcome this sentiment of popular distrust. The court believes the danger is that indignation at the crime and distrust of this defense will cause jurors to be incredulous of its evidence, and thus the actually insane may be unjustly convicted. This result can only be avoided by fully and justly determining this issue the same as any other fact entering into the question of a defendant's guilt. The idea of punishment, when associated with this unhappy malady, is revolting to the instincts of humanity. Modern research has done much to elucidate what was formerly very obscure touching the true pathology of insanity, although no invariable or infallible test of the existence of insanity has ever been found.

Mental Unsoundness Brought on by Excessive Drinking

(Martin vs. State (Ark.), 139 S. W. R. 1122)

The Supreme Court of Arkansas reverses a conviction of bigamy, remanding the case for a new trial, because it holds that it was error to refuse to instruct the jury that, while voluntary intoxication was no defense to the charge of bigamy, yet if the jury believed from a preponderance of the evidence that at the time of the alleged bigamous marriage the defendant was laboring under such a defect of reason from disease of the mind, regardless of the cause of such mental condition, as not to know the nature of the act he was doing, or, if he did know it, that he was ignorant that he was doing what was wrong, then they should find him not guilty.

The court says that the law on the subject is clearly and tersely stated in case of Reg. vs. Davis, 14 Cox, C. C. (Eng. Reps.) 563, as follows: "Drunkenness is one thing and the diseases to which drunkenness leads are different things; and if a man by drunkenness brings on a degree of madness even for a time which would have relieved him from responsibility, if it had been caused in any other way, then he would not be criminally responsible. * * * The man is a madman, and is to be treated as such, although his madness is only temporary."

Of course no degree of mere intoxication will excuse crime. There is, however, another effect of the excessive use of alcoholic liquors which will excuse crime; and that is mental unsoundness brought on by excessive drinking, which remains after the intoxication has subsided. If this latter condition exists to such an extent that the mind of the defendant is incapable of distinguishing between right and wrong in regard to the particular act he is charged with doing, he is not liable to punishment. In this case the testimony of the defendant, if it was to be believed, tended to show mental unsoundness which was separable from mere intoxication. The court should therefore have left it to the jury to determine whether there was any mental unsoundness, which was separable from the intoxication, and, if there was, whether it was sufficient to overthrow the defendant's sense of right and wrong at the time he married the prosecuting witness.

It was also error to exclude evidence which, when considered in connection with the other evidence adduced by the defendant, was intended to show that excessive drinking in his case always had the effect to produce a condition of insanity after the immediate effects of his intoxication had left him, such evidence being admissible for what the jury might consider it worth for that purpose.

Conviction of Abortion on Testimony of Accomplices—Disclosures that are Not Prohibited

(State vs. Stapp (Wash.), 118 Pac. R. 337)

The Supreme Court of Washington affirms a conviction of a physician of the crime of abortion, for which he was sentenced to serve a term of nine months in the county jail, and it does this even conceding that it might be that the defendant's connection with the crime charged was proved only by the uncorroborated testimony of two witnesses who were accomplices in the crime. The court says that, conceding that these witnesses were accomplices, their credibility was affected only by that fact, together with the fact that they denied knowledge of the cause of the miscarriage, and made some statements immediately thereafter inconsistent with their testimony. This court has heretofore recognized the rule that the testimony of accomplices, without corroboration, may be sufficient to support a conviction.

The defendant, as a witness in his own behalf, testified relative to his experience as a surgeon, showing that he had a large and varied experience as such, and gave testimony indicating his opinion that the operation charged to him was very unskilfully performed, based on conditions shown by the state's evidence, this being evidently for the purpose of creating the impression that it was not likely that a surgeon of his skill and experience would bring about a miscarriage in such an unskilful manner. Then the prosecuting attorney questioned him concerning his experience as a surgeon, where he performed the operations which were not performed in his office, when the last one was performed at the hospital then mentioned, whether it was not more than a year back, and what the operation was. The witness thought that it was for a pelvic abscess, on a woman. He was then asked if she was in the hospital pregnant, but objection was sustained to the question as totally irrelevant and immaterial. The court does not think that there was error. Assuming, for argument's sake, that the provision of law that "a regular physician or surgeon shall not without the consent of his patient be examined in a civil action as to any information acquired in attending such patient which was necessary to enable him to prescribe or act for the patient" applies equally to criminal actions, the court is unable to see that it was violated. It was true that a particular operation was being inquired about, but there was nothing testified to by the witnesses which identified the patient with any degree of certainty at all. The court thinks that the information disclosed by the witness was not such as is sought to be suppressed by this law, in view of the fact that

the identity of the patient was not disclosed; and it was not claimed that the testimony of the witnesses could lead to the identity of the patient.

Disinterment and Removal of Bodies Calls for Sanitary Regulations

(Ex parte Lee John (Cal.), 118 Pac. R. 722)

The District Court of Appeals, First District of California, holds valid a county ordinance requiring the health officer, in every case where application is made for a permit to disinter or remove the remains of a buried body, to investigate the application and ascertain whether the disinterment or removal can be made without danger to the public health, and, if so satisfied, to grant the application. It holds that the matter of the disinterring and removal of dead bodies is clearly one calling for sanitary regulations, and that, while the fee of $10 exacted for such permit by the ordinance in question was somewhat large, the court cannot say that it was so disproportionate to the services necessary to be performed in the faithful safeguarding of the public health as to warrant a holding that the purpose of the ordinance was revenue and not sanitary regulation.

Competent Evidence in Injury Case

(McCauley vs. Detroit United Railway (Mich.), 133 N. W. R. 11)

The Supreme Court of Michigan holds that, in an action for personal injuries sustained by the plaintiff in being thrown to the pavement in alighting from a car, causing a retroversion of the uterus, it was competent for her to show the seriousness of the injury and what the probable cost would be to effect a cure, and, after the defendant had shown that the proper time for an operation was immediately following the accident, it was proper for the plaintiff to show that neither she nor her husband had the means to pay for such an operation.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Laryngological Association, Atlantic City, May 9-11.
American Urological Association, New York City, April 2-4.
Arizona Medical Association, Bisbee, May 7.
Association of American Physicians, Atlantic City, May 7-8.
California State Medical Society, Del Monte, April 16-18.
Florida Medical Association, Tampa, May 8-10.
Georgia Medical Association, Augusta, April 17-19.
Iowa State Medical Society, Burlington, May 8-10.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
Montana State Medical Association, Helena, May 8.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New York State Medical Society, Albany, April 16-18.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
South Carolina Medical Association, Columbia, April 16-18.
State Medical Association of Texas, Waco, May 7-9.
Tennessee State Medical Association, Chattanooga, April 9-11.

COLLEGE OF PHYSICIANS OF PHILADELPHIA

The President, DR. GEORGE E. DESCHWEINITZ, in the Chair

The College of Physicians and the Public Health

DR. JAMES M. ANDERS: The College of Physicians of Philadelphia is intimately associated with the developmental history of our city and its founders clearly recognized the true relationship of medicine to the public health. A well-sustained effort has been put forth to safeguard the public health by timely suggestions, appeals to the legislature, and by petitions and protests to the local authorities. By a slight enlargement of its present activities the college could arrange for a systematic campaign of education among the laity by authoritative popular lectures. In this way it would be possible to mold public opinion into laws and sanitary regulation.

The Treatment of Epilepsy

DR. S. WEIR MITCHELL: In the consideration of this subject I shall limit myself to those cases of epilepsy which are various in type and known as idiopathic, a term conventionally employed, and one which it is to be hoped may some day be set aside. Treatment includes, first, the suppression of the symptom-complex by the use of drugs or other forms of general treatment; and, second, the treatment of the period in which the aura affords an opportunity to cut short the sequence of symptoms. I must frankly admit that none of the remedial measures we apply for the general treatment of idiopathic epilepsy has any firm foundation on reason or trustworthy experimentation on the lower animals. The minor epilepsy (petit mal), when it exists alone, is sometimes amenable to the use of bromids and responds favorably to some of the coal-tar products. Then, there are examples of the lesser epilepsy which are made much worse by bromids, and also in general epilepsy there are rare and inexplicable cases in which bromids at once make the convulsions worse and increase their number. For rapid action and for soothing purposes, I am of the opinion that the lithium bromid is the best. I state this with the doubt of self-criticism, because I myself introduced it into medicine. Because of the deleterious effects of the bromids it is desirable, of course, to give just that amount which being added grain by grain on return of attacks will eliminate finally the occurrence of any attack.

I believe that epilepsy originates always in sensorial centers with a discharge from these centers which is recognized or not by consciousness. I believe the aura always exists, but is unperceived in most cases owing to the suddenness with which the motor discharge follows. This statement is supported by the fact that an epileptic having distinct auræ may go on with lessening of the interval between the onset of the auræ and the convulsive attack and loss of consciousness until the time in between becomes too brief for memorial registration or any useful intervention.

I want to say a word as to a set of phenomena which have been, I think, improperly classed, especially by Oppenheim, as also being of the nature of auræ. Thus, certain people before an attack develop either a condition of slight excitement or a state of sensation of being agreeably well. A more distinct symptom is the curious personal odor, sometimes taking the form of bad breath, usually of an acid odor. In dealing with epilepsy of the Jacksonian type or originating in a sensation confined to one limb, a sudden ligature of that limb will frequently arrest the attack. In one case in which the aura was brief I succeeded very well in bringing this about by having a spring arrangement worn on the left arm and set free to act by pulling a cord fastened at the wrist. The attack was thus usually checked. A great change in the mode of life sometimes results in curing epilepsy. The use of amyl nitrite I am sure will arrest attacks of epilepsy if the aura give time and opportunity.

There is one other method which I consider important. It is not my discovery. A physician whom I met on a train told me that by taking a long inhalation, holding his nose and then forcibly contracting his chest he could check the progress during the aura and prevent altogether the convulsions. He assured me that he had thus succeeded finally without bromids in stopping altogether the epilepsy. I have seen a number of patients relieve themselves by this means. I, therefore, suggest in these cases a moderate amount of bromid, with some effort to use the method in question. With the exception of these slight hints as to the aura, I want most to direct attention to the fact that probably all attacks have auræ and all atacks have a sensory origin.

The Medical Treatment of Epilepsy

DR. F. X. DERCUM: The treatment of epilepsy is divided into general or physiologic treatment, and a treatment based on drugs. In the physiologic treatment I would lay special stress on the necessity of keeping the avenues of elimination

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open, and of the oxidation of the tissues. Diet should be adapted to each individual case. In drugs we possess a most valuable means for the elimination and often for the control of the seizures. I have made use of sodium chlorid withdrawal and agree with the opinions of others as to its value. I believe it is important to combine with the bromids one of the glycerophosphate salts, preferably sodium glycerophosphate. Thyroid extract is valuable principally in epileptic children with rather marked stigmata of arrest, with signs pointing to possible thyroid deficiency. It should be given in small doses over long periods of time. My observations bearing on the possible rôle of the internal secretions in the pathology of epilepsy suggest very strongly disease of the pituitary body.

I am in accord with Dr. Mitchell regarding the determination of the presence of an aura. I regard the aura as a sensory discharge which begins in a sensory area of the cortex. From such a sensory area the discharge travels either directly or by association fibers to a motor area and arriving there, a motor discharge, a convulsion, takes place. In regard to the arrest or abortion of attacks which the recognition of the aura permits, especially by mechanical procedures, my experience has led me to the conclusion that this can be accomplished for a time only, and that the impulse or tendency to the convulsion sooner or later becomes so great that after a while all artificial barriers are broken down and the convulsion takes place. The toxicity of epilepsy has suggested a serum method of treatment, but the failure of Ceni's attempt in this direction is so recent that it needs only to be mentioned.

The Surgical Treatment of Epilepsy

DR. WILLIAM J. TAYLOR: My experience has led me to confine the surgical treatment of epilepsy to a very limited number of carefully selected cases, and after the most thorough study by both neurologist and surgeon. Occasionally, great benefit may result and unexpected pathologic conditions may be found which may admit of removal. The needs for operation in traumatic epilepsy are well recognized by all surgeons and neurologists. No permanent benefit can be expected from operation in the essential epilepsy of idiopathic or nontraumatic type in which the attacks are general and without local onset and the operation may do harm. Idiopathic epilepsy with focal symptoms, however, if seen early should always be operated on. When a focal epilepsy develops and is due to gross brain disease all surgeons are united in advising operation, and the earlier the operation the better. I do not think we are now justified in excising the center from the convolution of the brain with any expectation of benefiting the patient, unless there be distinct evidence of disease.

A Surgeon's View of Epilepsy

DR. CHARLES H. FRAZIER: Of fifty-three operations on epileptics, in only six is it recorded that the findings were negative, and of the remainder the following conditions were noted: cysts, eight; adhesions, six; pachymeningitis with adhesions, edema or cysts, thirteen; edema alone, eleven; with cyst, one; thickened dura, two; organized blood clot, one; cystic degeneration, two; cortical gliosis, two. Of greater importance even than the performance of the operation is the selection of cases. In my experience the majority of cases present no surgical indications. I include in the indications for operation all cases of traumatic epilepsy with such restrictions as have been indicated, all cases of Jacksonian epilepsy, and cases of general epilepsy in which there are symptoms indicating a focal lesion. As a matter of prophylaxis, we should be a little more painstaking in the examination of patients with cranial and intracranial injuries. If within a few days of the injury we can detect signs of hemorrhage, either epidural or subdural, the suggested region should be uncovered and the clot, if found, removed. To standardize results, no patient should be deemed cured unless at least three years have elapsed since the operation. Turning to my own records, out of twenty-five cases which have passed the three-year limit and could be traced, seven or 28 per cent. have been profoundly influenced by the operation.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twenty-Second Annual Meeting, held in Chicago, Feb. 28, 1912

(Concluded from page 891)

Report of the Judicial Council

The following were some of the recommendations accepted by the association:

The council recommended that the applications of the University of Pennsylvania, University of Vermont, and the Yale Medical School be accepted. Action on the applications of the Dartmouth Medical School and the Medical School of Maine was postponed until the next annual meeting because of the fact that the council was unable to make an inspection of these two schools. Arrangements for such inspection had been made, but did not materialize, so that the council found itself in the position of not having the necessary information at hand to take action on these two applications.

The status of the medical department, so-called, of the University of West Virginia was thoroughly investigated by the council, and the conclusion reached that inasmuch as the University of West Virginia has no medical department, with a separate medical organization and a medical faculty distinct from that of the college of arts and sciences, the ruling made in the case by the chairman of the council, that the school is no longer in existence, be sustained, and that time credit cannot be given to the students in attendance on the work offered this year. The council further recommended that as soon as the medical department is properly organized to meet the requirements of the state medical boards and of this association, and receives recognition from state medical boards, that the school be re-admitted to membership.

The position of the Meharry Medical College of Nashville, Tenn., was duly considered by the council, and the council recommended that there be established or created a membership in the association restricted to such medical colleges as are exclusively for the colored race, such colleges to be designated as "affiliated members."

The chairman of the council having presented evidence of non-compliance on the part of several colleges with the entrance requirements of the association and of insufficient methods of evaluation and lack of system in keeping records by some examiners, the council recommended:

1. The credentials of all applicants for matriculation should be submitted to the appointed examiner of the evaluation board, who shall issue a certificate of entrance or give notice of rejection.

2. The examiner or board should keep on file in a convenient place all credentials presented by the applicant, or satisfactory data to verify such credentials.

3. These credentials should be open to the inspection of any representative of the association for verification.

4. Records of the examination papers of applicants should be kept on file.

As for the granting of time and scholarship credits to students coming from Class B and Class C schools, this is an important question and deserves careful consideration. If students of low-grade colleges are acceptable and given credit by Class A schools, the distinction is one of name rather than of grade. The council recognized the difficulty in formulating a rule by which members may be governed by evaluating the credentials of students seeking matriculation with them.

Therefore, it was recommended that the greatest care be exercised in rating students coming from colleges that have a rating below Class A in the American Medical Association classification, and that while time credit might be given, subject credit should not be given without a thorough examination.

The council also recommended that this association take cognizance of the classification made of medical colleges of this country, and where a college in membership in this association is not classed as an acceptable college by state medical boards or other evaluating organizations, the council shall inspect the college to verify or correct these findings.

Amendments to the Constitution

The following amendments were adopted:

ARTICLE II.—*Section 4.*—The annual dues shall be $25 a year, payable in advance not later than March 1. The year shall be estimated from September 1 to August 31, inclusive. Colleges in arrears after March 1 shall be dropped from the membership roll and can be reinstated only by making formal application to the executive council. The power of reinstatement shall be vested in the executive council, subject to approval of the association.

ARTICLE VII.—*Section 1.*—The officers of this association shall be a president, vice-president, secretary-treasurer, and an executive council of seven members, consisting of the outgoing president, the president, the secretary-treasurer and four elective members, two to be elected to serve one year and two to be elected to serve two years, and thereafter, two to be elected at each annual meeting to serve two years. All the remaining officers to be elected to serve one year, or until their successors are elected.

Section 2.—The president shall preside at all meetings and perform such other duties as parliamentary usage in deliberative assemblies and the by-laws of this association may require.

Section 3.—The vice-president shall preside in the absence of the president, and perform such other duties as may be prescribed by the association.

Section 4.—The secretary-treasurer shall record the proceedings of the meetings of the association, and edit and publish the same under the direction of the executive council. He shall collect the dues and assessments from the members. He shall take charge of all monies that may be received from all sources and deposit the same in a bank in the name of the Association of American Medical Colleges. He shall disburse the money only on order of the chairman of the executive council. He shall report to the executive council on the work of his office whenever requested, and shall make an annual report to the association. He shall perform such other duties as may be required of him by the association and the executive council.

Section 5.—The executive council shall organize after each annual meeting and elect a chairman. After such organization it shall appoint the following standing committees and representatives: 1. Education. 2. Research. 3. Pedagogy. 4. Equipment. 5. Representatives to other organizations, and such other committees as may be deemed necessary. The council shall have and exercise direct supervision, general control and management of the business affairs of the association, subject to the direction and approval of the association. It shall have the power to fix the salaries of the officers and disburse funds for purposes pertaining to the affairs of the association. It shall have the power to investigate any charges made against members of the association for violation of the rules and regulations of the association and to settle disputes between members. It shall inspect and examine colleges making application for membership, and shall inspect colleges in membership in the association that have been discredited by other evaluating organizations. It shall have power to fill vacancies occurring in any of the elective offices during the year.

Resolution on Alcohol Excise Tax

Resolved, That in order to promote the advance of instruction and research in the medical schools of the United States the federal act to remit the excise taxes on alcohol used in museums, universities and colleges for scientific purposes should be so amended as to permit, under suitable regulation, the use of tax-free alcohol in all laboratories and all departments of medical schools, including hospitals and dispensaries, for instruction and scientific purposes.

Report of Committee on Pedagogics

DR. G. H. HOXIE: Reports secured from colleges show that the curriculum varies in its demands on the student's time from 5,628 hours to 9,796 hours. In schools giving only the first two years of the course, the range is from 3,315 hours to 4,600 hours. The committee commended the course adopted by one school which proposes to make home study part of the published requirements. In the reports in which a comparison between the estimate of the students and that of the instructors was made, the result appears that the average time required of the student greatly exceeds the estimate of the instructor. In one case the instructor's estimate was two hours, while the student's estimate was from five to sixteen hours. This finding shows the need of checking up the matter of arrangement of the work.

Colleges are meeting the time requirement in two ways. One group believes that the time requirement of the curriculum, 4,000 hours, represents the total time to be required of the student. The other group requires 4,000 hours in the class-room and preparation time besides. The result is that the latter require nine and ten thousand hours of work. The university schools, in general, work on the basis of requiring outside reading and study, that there be as many if not more hours devoted to the preparation of lessons as are allotted for recitations, lectures and laboratory work. The committee appreciates that the entire medical knowledge cannot be acquired by the ordinary student in 136 hours; but the graduate must be thoroughly grounded in the principles of pathology and therapeutics so that he can command the scientific procedures by which additional knowledge is to be obtained. In many schools there should be a decrease in the amount of material presented, restricting the work to the teaching of the essentials and omitting the non-essentials.

The committee concludes that 1,920 hours represent the average requirement for a thirty-two weeks' year, or 2,160 hours for a thirty-six weeks' year. This makes an 8,000 hours' course as much as should be demanded. The course of study should be fitted to a definite number of hours and not to a conception of what we should like to have the student know. A syllabus must not dictate methods, but rather should indicate the relative value of the material to be taught in each department. Graduates are not now being turned out with a symmetrical training, or a training that fits them for practice.

The Addition of a Fifth Year to the Medical Curriculum

DR. JOHN M. DODSON: Object teaching has largely supplanted the didactic lecture and recitation in the first two years of the curriculum, but unfortunately it has made little progress in the clinical subjects. It is a marked advance in medical education, parallel to the raising of the entrance requirements and the lengthening of the medical course. It is unwise at the present time to contemplate any further advance in the requirements for admission as a universal standard in the near future. Two years of college work apparently is a sufficient requirement. The next step in advance, the most needed and under right conditions the most feasible, is the addition of a fifth or practical year to the present course of study, this year to consist of service as an interne in a hospital under supervision of the faculty, or, in exceptional cases, for those who look forward to a career of teaching and investigation, of advanced and research work in one or more departments of the college. This fifth year should precede the conferring of the degree. It may be conservatively estimated that there are about 700 hospitals in this country, of fifty beds or more each, an aggregate of over 90,000 beds. This number does not include sanitariums, special hospitals or infirmaries. About sixty-four hospitals, with 10,000 beds, are already controlled more or less completely by medical schools. About 300 hospitals, with approximately 45,000 beds, are located in cities in which medical schools may be found, but which are not operated or controlled by these schools. About 320 hospitals, with approximately 35,000 beds, are in cities containing no medical schools. Each one of these institutions means an intern for every twenty-five beds, so that every medical graduate may receive an internship. Six medical schools have an optional fifth year. One school requires this year for graduation. In Germany, Great Britain, and France the practical year is compulsory.

As to the curriculum for this fifth year: the hospital and dispensary are the laboratories for the clinical years, but the hospital is a place primarily for the care of the sick, and everything else must be subordinate to the welfare of the patient. No patient should be used as a clinical subject

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against his will. The hospital where complete and accurate histories are written, where thorough diagnostic methods are carried out in a well-equipped laboratory, is almost without exception under the control of a high-grade medical school. The hospital needs association with the medical school quite as much as the college needs the clinical material of the hospital. Hospital boards realize this and are asking college faculties to assume entire responsibility for the conduct of the hospital so far as its medical work is concerned. The maintenance of a hospital is not properly a function of the medical school, nor should the medical college attempt to duplicate hospital accommodations already in existence and probably in excess of the demands of the community. It should seek to establish the proper relationship to the hospital, and secure the necessary control which cannot fail to be of advantage to both the hospital and the school.

No college can assume the ownership and maintenance of a hospital of such magnitude as to supply internships to all of its graduates. A hospital in which satisfactory intern service may be had must have a good system of keeping clinical records, a well-equipped clinical laboratory and one or more members of the staff must be able and willing to supervise closely the work of the intern, correct his mistakes and give him needed instruction in the details of the practice of medicine. Such staff members may be made extramural members of the faculty, in order to secure their cooperation. A trained, salaried pathologist is a valuable addition to the hospital staff, and a school of nurses cannot fail to prove valuable educationally.

Of the student during this year of intern service it should be required (1) that he be under the immediate supervision of a member of the college faculty, to whom he reports, and who acts as his advisor. (2) The student should report at least once a month to his faculty superior, setting forth the nature of the cases he has had in charge, and certifying to the fact that he is writing accurate and complete clinical histories, is making the necessary laboratory examinations, etc. These reports should be attested by his sponsor on the medical staff. (3) He should, if possible, complete some piece of original research along clinical lines embodying his results in a thesis to be presented to the faculty and approved by them as a requirement for graduation. The interns of two or three schools may serve in the same wards. It will stimulate and broaden their views and be helpful in making them better practitioners.

DISCUSSION

DR. ARTHUR DEAN BEVAN: I have been very much impressed with the necessity for introducing into the college curriculum, as an integral part, this intern year. I have found that in teaching surgery the time allotted is altogether too limited. We have in the third and fourth year less than six hundred hours to teach the students modern surgery in all its branches.

We feel that it is essential to give our men a thorough course in surgical anatomy; in surgical pathology; in operative surgery on the cadaver and on animals; a certain amount of dispensary work; to instruct them in clinics and in conference in general regional surgery; in anesthetizing and as much as we possibly can in the way of small class instruction groups in hospitals. When you add these courses all together, even though you are thrifty in saving your time, there is very little left of the six hundred hours—so little that the amount of actual hospital instruction one can give is not enough to round out the students' course. Even if you have small classes and absolute control of the hospital and all the material and facilities you can ask for. With the time allotted and the facilities for teaching, it is absolutely impossible, at least in surgery, to give the student anything like a thorough clinical course. In other words, it is essential to add this hospital year.

The only time we can have the student do the actual work of surgery is when he is part of a machine that is giving the patient medical and surgical attention, and that is the time when he is an intern in the hospital. I believe, then, that we are absolutely confronted with the necessity for making this intern year an integral part of the course and the student of good caliber has already done this before us. In our own school every man has had an internship, with the exception of two or three who for good reasons have not served. The medical student has himself seen the necessity for it.

DR. BURTON D. MYERS: Three years ago, in Indianapolis, we established the fifth year. The first year we had no applicants for the special degree. Last year there were six who completed the work for the degree. This year twenty are candidates for the degree, seventeen out of a list of fifty graduates and three out of the preceding year's class. Now, there is something further in this optional fifth year than a mere hospital year, that is, the completion of an original thesis involving some original work. The first year they were not much interested in it, but lately we have made something of a feature of it at graduation. We insisted on the rewriting of some of the theses, and some were later published in a medical journal, and that was appreciated by the men.

DR. F. F. WESBROOK: Last year I presented a paper here with reference to the action Minnesota had taken and asked for the experience of others who had instituted this fifth year. I was firmly fixed in my conviction that the fifth clinical year should be taken. Dr. Christian asked me if I did not think it would be just as well to add a year of laboratory work, instead, for those who were to teach. I expressed it as my opinion that this was not desirable—that all should take the hospital work. I have been converted. I do think that a year of laboratory work for those who are to teach, or specialize in these branches, might well be substituted for the hospital year.

Of the graduates of Minnesota about 80 per cent. become general practitioners and about 20 per cent. teachers or research men.

In Minnesota we now have our hospital in connection with the college, and we expect to appeal to people interested not only in educational work, but in charity of the highest type. I see very great and practical difficulties in the way of applying this year wisely at any very great distance from home. We have established very friendly relations with our municipally controlled institutions, and the managers are much interested in the plans, but they represent the municipality and we represent the state, and so there are no complications. But, suppose, we entered into relationship, for instance, with New Orleans? It would be an exceedingly hard matter for Dr. Dyer to examine these students, even after the matter of the expense of getting the students down there had been disposed of. But, on the other hand, if we could arrange with some member of the faculty of Tulane, for instance, to have supervision over these students, reporting back to our faculty, even this difficulty could be overcome. I am much interested in this whole subject, and think it absolutely necessary that we have this practical year, and I furthermore hope that a system of checking the work of these students will be devised. We have already, during our stay here, been struck forcibly with the inadequacy of our examination work with our teaching system. It is going to be just as difficult if you do not get some good method of putting a check on these students as well as to have something to show to other students, to handle this branch of study. They are going to have advantages that will be well worth their while. I think the mutual side of this requirement must be fully understood. I should not wish to put my senior students into an institution which would be practically in control of one year of that student's training with no check at all on what he was able to do, so that if the institution were erroneously led to the conclusion that the student was not fitted for the work they could lose to him from two to any number of months of his work. That would be delegating to an outsider more power than we would want to give to any teacher.

That was a practical difficulty I had in mind in placing students in remote institutions. It will require very careful study and thorough understanding between student and faculty. I should like to see the time come when we may exchange students for the benefit of the colleges themselves, to prevent their becoming narrow and for the benefit of the alumni.

DR. REUBEN PETERSON: The first thing we should do is to find out the actual conditions confronting us, have a personal inspection made to learn what these hospitals are doing in the way of instructing interns. After we have these facts in our possession, then we can take up with the various bodies having control of these institutions suggestions to improve conditions. I believe we are leaping ahead too fast. We must remember that the student has already tried to solve this problem for himself, but did not have it in his power. The minute one intern or several tried to improve conditions in the hospital they were suppressed and they did not get very far.

Hospitals are multiplying. Large institutions that have treated the question of intern service haughtily are finding that students are not applying to them. It can be handled along these lines and I believe handled very well.

I think we had better be careful about degrees and affiliation with hospitals. If we place hospital chiefs or clinicians on our medical school faculties we may possibly make a good many mistakes; but if we go carefully and find out the true condition of the hospital and then put them into Class B if they are not all that we think they should be, they will look to see what hospitals are in Class A and strive to get into that class. We can then submit to them workable plans for the work of interns, and it will enable us to accomplish much.

DR. JOHN M. DODSON: We should go to work deliberately, and no school should undertake to require of the student things which it is not able to furnish. It is true that we have students who do this of themselves, but to certify to it and have it incorporated in the diploma will mean something more. To my mind this movement is of far more importance to the hospital than it is to the medical school. The conditions in detached hospitals are deplorable. I believe that the service rendered and the research done in the wards will do more than anything else to elevate the work being done in these hospitals.

The Migration of Students

DR. E. P. LYON: Our personal duty to the individual student is our fundamental duty. If we can do right by the individual student we shall do right to the colleges and the state; we will see that his obligations are met; that his deficiencies are corrected; that he is protected from his misdirected inclinations. If need be, he will be kept from a profession for which he is not fitted. Every case is an individual case. The individual student means individual consideration, the breaking loose from rules and the application of principles rather than formulas. The first condition in dealing with the student is that someone must know all about it. Rules should be broken only when there is a good and sufficient reason for doing so, and a body of men should decide when this may safely be done. Neither the dean alone nor any member of the institution should be allowed to decide. A committee of the faculty should have the case of the individual student referred to it, with a power to break rules, as their training in educational methods and experience may indicate. The paid full-time instructors are pedagogues as well as practitioners. They are educators, they are always in touch with the work, and they, with a suitable representation from the clinical faculty, might well constitute such a committee.

Few good students come from good schools. A few good students change for reasons unconnected with education. Provided such reasons are honorable, such students should be accepted on the basis of equivalents of discipline rather than exact quality of subject-matter. The migration of good students should be encouraged. The poor students from good schools usually are not desirable. Much of the credit they have received is contingent. Frequently, however, one of these students will settle down to business and do well after his migration. A third class of migrating students includes those who come from poor schools. That does not mean necessarily that the student himself is a poor student; in fact, he is usually a good man who desires to better his condition. To refuse him all subject credit is unjust. His credentials and grades should be carefully gone over, and, if necessary, contingent credit may be given. For example, give him credit in dissection if he passes in topographic anatomy. This procedure is safe and it is sound pedagogically. Additional laboratory work may be required, or attendance in summer school or on short special courses. No student from an inferior college should be received into the senior year. We always require at least one complete laboratory course, even if the student is admitted into the junior year. In our experience the students from poor schools, who could be admitted, have done well. The school from which the student comes should always be consulted, and an exact statement obtained with regard to the student. Some schools refuse to respond to requests for grades or information regarding students who wish to enter another school. Such students may properly be received from their class grades or attendance certificates. Sometimes justice to the individual requires that a rule be not enforced. However, each case should be considered on its merits and the student held rigidly enough to test his ability and knowledge. Hard-and-fast rules cannot be followed, but certain principles find more or less general application.

DISCUSSION

DR. WILLIAM J. MEANS: The migrating student is certainly a very interesting specimen of the genus homo, exceedingly interesting to us in our college relations. I agree thoroughly with the doctor on the migrating student from the doubtful school. Some of our brightest and most intelligent students spent their first years in low-grade schools. They recognized their trouble and tried to right it. They are good students and we are glad to have them.

Of the second class of students—the doubtful student from the good institution—I have nothing to say. They come from good schools. We have half a dozen, more or less, in the first and second year that we would be perfectly willing to pass along to any one who wants some more students, and yet we cannot say they are absolute failures. I think some of the brightest memories of my work are of the students we have had who in their first and second years with us were not good students. They were bright young men, but they seemed to bear no responsibility on their shoulders of their work. They were encouraged and helped along until they did well in their last years, and have made good, strong men. I have known of many instances where men have been conditioned and have found it to be due to the personality of the teacher. At the end of the term they were examined and conditioned and they returned to their homes, many of them never to come back again. That is not right, and I wish to emphasize every point raised.

DR. REUBEN PETERSON: The spirit of what Dr. Lyon has said should commend itself to every one of us. After all, rules are only for organization purposes, to give us lines along which medical schools should be run, and we should consider individual students and do by them, individually, as well as we can.

It is not so much the question of the failure of these students in their studies that leads them to leave one medical school, but the fact that a student who is not progressing at one school may go to another and find himself.

DR. ALFRED L. GRAY: There is another class of migrating student that gives us trouble—the class who appeal to you for admission because, for some really good reason, such as ill health, wish to change during the session the school of their first choice.

DR. JOHN M. DODSON: There are just two points that I wish to make: One is the fact that medical schools do not deal fairly with each other in issuing to such students credentials setting forth their standing. I think it is better for schools to apply direct to each other for them, rather than to have them come through the hands of the students. If a student has been warned, disciplined or conditioned in any way that also should appear plainly. The students do not like it, but it is the only fair, right thing to do. I frequently say to students: I shall be glad to write a letter for you to any school you select recommending you to careful consideration, but I must tell the truth with regard to your record with us. The record must stand as it is if it is correct. If it is not correct, we will gladly investigate any seeming errors and correct them if necessary.

A great many of the students who come to us are from schools whose instructors used to be with us and who are

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familiar with us and with our requirements, with our standing and our records, and they are able to give us the information we need. Such a letter as that is the best possible method we have of evaluating the student. They act, in a way, as examiners of the student for us. Schools handling migrating students should know each other. I think it is a good thing for the dean to visit as many schools as he can. He can learn more during a half hour's visit at a school than he will ever know from perusing college announcements and curriculums. Then there is another plan which with our summer quarter we find very advantageous. A course of study is selected to give a student a knowledge of certain branches in which he is weak. That plan was instituted many years ago and has proved of great value to our own students. Students can come to us during the summer quarter and we can determine before the fall term begins what their standing is, whereas if they come to us at the beginning of a regular term we have no means of telling except by the credentials they bring.

DR. EGBERT LE FEVRE: The college has a duty to the public and a duty to its other students. When a student comes to us without satisfactory credentials, what shall we do? If they go through one year and we find that they are absolutely unfitted for the study of medicine, shall we not stop them, if we can, from pursuing a hopeless professional life? Then we have those who, on the other hand, are unfit morally. We should stop them absolutely. We should always consider the individuality of the student. The automatic rejection has been bad. No man is rejected automatically, but before he is accepted the standing of the year must meet with the approval of the dean. No other man can approve it. That man must be reviewed by all the men present before he is rejected hopelessly. Conditioned men are given a chance to make up their work before they go down automatically. We are liberal in first examinations and they are given every chance. I have advised men who wanted to repeat the course to go elsewhere. I think it is bad for a man whom we have conditioned when the curriculum is so inelastic that he cannot repeat the course in which he has failed and lead to the next year. As medical schools we must come to the course method, whereby a man must have so many courses for graduation rather than to hold every man rigidly to six or eight weeks with no possibility for change. Some men could take eight years of one course that another would get through with in as many weeks. I hope that sometime we shall have a course system instead of a time system.

DR. HENRY A. CHRISTIAN: We have had considerable experience with all sorts of migrating students, and there are two or three points coming out of our dealing with these men that I think may be of help to others. The first is that it seems to me important to explain to men coming from advanced standing the responsibility of his two years taken elsewhere in so far as meeting the requirements of the state board lies with the school from which he comes. The school to which he comes carries only the responsibility for the years with which he is with them. That explains the time incident. A man came to us from a university conducting a medical department and a collegiate department where it was possible for men to take certain years of collegiate work and then go into the medical department and for the complete course receive a combination diploma. That man had actually done medical work for two years to the satisfaction of the men teaching medicine. We had accepted him, but doing so did not make this explanation. He went to another state for registration. We gave him credentials for two years in medicine taken at Harvard and referred him to the other institution for the preceding two years. They gave him credentials, but in looking it up discovered that for one-third of one year, although taking medical work, he was not registered in the medical department. That man had great difficulty in getting registered in the state to which he applied, because he had not been registered for four full years in the study of medicine.

We have had many similar instances of the kind where the absolute rule of the state boards made it very hard for the man to register, so that we now say to each man who comes to us: if you apply for registration in any state we are not responsible for work in the other school, except as it is satisfactory to us. So far as your case appears on the surface we do not anticipate any trouble, but if trouble comes we are not responsible for it. We have to be exceedingly careful in receiving these men or we shall get into trouble with the state examining boards. We should not accept a student as having fulfilled the conditions of the institution to which we admit him unless we know he has had some preliminary training and could have fulfilled our requirements had he come to us in the first place.

Another point is the advisability of considering conditioned students. Let us say we accept a man to the second year, conditioned in anatomy. Is that right to the man? He is going to have a hard time anyway. He has the handicap of getting accustomed to new surroundings and work with which he is not familiar, new teachers, etc. Should we give him the additional handicap of a condition in some subject? I think not. I believe he should be entered for the full year or be advised to take the year over, not allowed to go on conditioned.

If you get him in the summer you can remove the conditions. If you get him in the autumn and then expect him to come up to your own students he will come out at the end of the year pretty badly damaged. If he is weak in anatomy, but you think he has had enough physiology to make it up, say all right, but do not pass him in conditioned. Either accept him to one year or the other. The matter of conditions and the necessity for meeting these was one of the conditions that led to the adoption of the plan of examinations by which a man is examined before receiving his degree, and by it he either passes or fails. If he passes he is entitled to begin the third year's work. If he cannot pass it, he must take the second year over. He is not entitled to take the first full examination until he has studied with us a year. For instance, if he comes in at the beginning of the second year he has a full year before him before he faces his first general examination. He has his work accepted on the standing he had at the other college, or he is required to pass the practical examination, but in either event before he comes to the first general examination he has passed his practical examination. He might be able to postpone the practical examination in anatomy until the end of the year if he wishes, but before he comes up for the general examination he must have passed the practical examination. In that way we can allow considerable latitude in examining, and we are responsible only for the time during which we have had him in charge.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

March, CXLIII, No. 3, pp. 313-468

1 Functional Diagnosis of Pancreas Disease. J. H. Pratt, Boston.
2 Pellagra in Its Relation to Neurology and Psychiatry. B. R. Tucker, Richmond, Va.
3 *Gastric or Intestinal Hemorrhage as Early Manifestation of General Toxemia. N. Jacobson and C. D. Post, Syracuse, N. Y.
4 *Dietetic and General Management of Typhoid in Children. C. G. Kerley, New York.
5 Vaccination Against Typhoid in United States Army. A. W. Williams, Philadelphia.
6 *Experimental Study of High Intestinal Obstruction. J. A. Hartwell and J. P. Hoguet, New York.
7 Loss of Emotional Movement of Face with Preservation or Slight Impairment of Voluntary Movement in Partial Paralysis of Facial Nerve. W. G. Spiller, Philadelphia.
8 Relationship Between Erythema Nodosum and Tuberculosis, with Report of Case. F. S. Meara and M. Goodridge, New York.
9 Certain Changes in Elastic Tissue of Pelvis of Kidney and Their Relation to Hydronephrosis. H. Oertel, New York.
10 Thrombo-Angeitis Obliterans. T. H. Coffen and C. G. Heyd, New York.
11 Effect of Caffein on Nitrogenous Excretion and Partition. C. B. Farr, Philadelphia, and W. H. Welker, New York.
12 Cardiospasm; Treatment and Use of Esophagoscope for Examination. W. Lerche, St. Paul.

3. Gastric Hemorrhage in Toxemia.—Jacobson and Post claim that certain microorganisms, particularly those possess-

ing the characteristics of the pneumococcus are capable of provoking severe hemorrhages in various parts of the body, and that gastric and intestinal hemorrhage can be the first evidence of such a toxemia.

4. **Typhoid in Children.**—With the diagnosis of typhoid positive, Kerley dictates a list of permissible food articles. For a patient five years of age, the diet schedule includes gruels, usually two ounces of the cereal to the pint of water. Gruels are made palatable and their nutritional value increased by the addition of broths or milk sugar or sherry wine. Cereals very thoroughly cooked, such as rice, farina and a wheat cereal, are served with butter and cane or malt sugar or with maple syrup and butter. Milk foods are rarely given oftener than once a day. Among those used are matzoom, kumyss, eiweiss milch of Finkelstein, and skimmed milk. The latter is always given mixed with a gruel and rarely oftener than once a day. The whites of two, three or four eggs are given daily with orange juice, or frozen with orange juice and cane sugar and served in the form of a sherbet. Lemonade and weak tea, both with the addition of cane sugar, are given between the regular feedings.

Early in the convalescence scraped rare steak, custard, soft boiled egg and junket are allowed. It is advisable to feed the patient lightly for the first few days, until the organism adjusts itself and adapts itself to its changed condition, when freer feeding may be allowed. Food will be tolerated during the latter part of an illness which could not be taken during the earlier stages. Feedings are given never oftener than at three-hour intervals or less than four hours, in quantities that we know from observation the child will be able to take care of. One of the reasons for the considerable variety is that children soon "go stale" on any one article of diet; if given persistently, it is refused or taken in small quantities. If it is forced, it is very apt to be vomited; or if retained, the child in all probability will not digest it.

The diet schedule for a typhoid patient, aged 5 years, would be something as follows: 6 a. m.—Eight ounces of gruel with sugar or a small amount of broth added. Zwieback or dried bread and butter. 8 a. m.—A drink of weak tea with sugar or the whites of one or two eggs with sugar in orange juice. 10 a. m.—Farina, a wheat cereal, rice, served with butter and sugar, or maple syrup and butter. Drink of weak tea or kumyss or matzoom, or perhaps a dried milk food. 2 p. m.—Eight ounces of kumyss, matzoom, or skimmed milk diluted with gruel. Zwieback; dried bread and butter if wanted. 4 p. m.—Orange egg sherbet or a drink of lemonade or tea and sugar. 6 p. m.—Cereal or gruel with sugar and butter or with broth. If skimmed milk has not been given at 2 o'clock it may be given with gruel at this time. 10 p. m.—Gruel with sugar or broth or with wine. Fat in considerable quantity is poorly digested by young typhoid patients. It may be given, however, in small amounts when mixed with other foods. Foods containing protein should not be given in considerable amount until we know something of the course of the disease. Milk, scraped beef and soft boiled eggs are not well borne in young typhoid patients and a temporary reduction of protein is not felt by them. Drugs are of no service except to produce an evacuation when there are not two in twenty-four hours, and to control the evacuations when there are more than four in twenty-four hours.

6. **High Intestinal Obstruction.**—The following is a summary of the findings of Hartwell and Hoguet's work: 1. A high intestinal obstruction, that is, 10 to 30 cm. from the pylorus, in dogs, may not produce death for ten days, provided the gut wall is not damaged. If it is damaged by section and inversion the average life is only half as long. 2. There are found in the kidney and liver cellular changes which are the same as those found in many toxic diseases. The intestinal mucosa is found to be damaged to such an extent that it may readily be conceived that it has been deprived of its natural defense against the passage of toxic substances, unaltered, through it. 3. Bacterial invasion of the blood and organs does not necessarily occur. 4. Dogs deprived of food for forty-eight to seventy-two hours may die as early as those fed ten to twenty hours before the obstruction is produced. Decomposition of foodstuffs is not, therefore, an essential element in causing death. 5. If a double occlusion of the alimentary tract, with reestablishment of the continuity of its lumen, above the lower ileum be produced, the damage to all the tissues is greater than with a simple obstruction, and the course of the disease to a fatal termination is shorter. A double occlusion in the lower ileum produces much less damage than in the upper. 6. The action of the gastric juice, bile, pancreatic juice and duodenal secretions are not a requisite in producing the symptoms and pathologic changes seen in intestinal obstruction, because these are produced by a double occlusion in the upper ileum when none of these secretions are blocked. 7. Simple occlusion of the pylorus does not necessarily produce any evidence of a toxemia in two weeks, and the gastric mucosa at the end of this time shows no evidence of being damaged. 8. The above findings indicate that death from intestinal obstruction in dogs results from the presence of toxic substances in the circulating blood which produce fatal lesions in the kidney, liver and other tissues. The essential factor which admits these substances into the blood is an injury to the lining cells of the intestine caused by the irritating action of the stagnated contents, together possibly, with the mechanical damage due to stretching. The poisons themselves may arise from the secretory activity of the various digestive glands, or from bacterial activity. They may be the same as those found in the normal tract or they may be substances newly formed under the conditions of stagnation. Whatever their source, they are innocuous so long as the mucosa remains normal.

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

March, IV, No. 9, pp. 145-164

13 Surgery of Stomach. J. M. T. Finney, Baltimore.
14 Physician's Interest in National Standards; Conditions and Possibilities. H. P. Hynson, Baltimore.
15 Book and Journal Club of Medical and Chirurgical Faculty. H. B. Jacobs, Baltimore.

Maryland Medical Journal, Baltimore

March, LV, No. 3, pp. 53-78

16 Maryland's Annual Typhoid Problem. C. W. G. Rohrer, Baltimore.
17 Is Syphilis Hereditary? E. K. Tullidge, Baltimore.

Annals of Surgery, Philadelphia

March, LV, No. 3, pp. 330-472

18 *Indications For and Against Operative Treatment of Simple Fractures. J. H. Gibbon, Philadelphia.
19 *Treatment of Simple Fractures; Some End-Results. J. M. Hitzrot, New York.
20 Luxation of Ulna Forward at Wrist (Without Fracture). F. J. Cotton and W. J. Brickley, Boston.
21 *Osteomyelitis of Long Bones. J. Homans, Boston.
22 *Diagnosis of Diaphragmatic Hernia. H. Z. Giffin, Rochester, Minn.
23 *Management of Opening in Transverse Mesocolon in Completing Operation for Posterior Gastrojejunostomy. W. J. Mayo, Rochester, Minn.
24 Sarcoma of Small Intestine. J. Douglas, New York.
25 Inversion of Meckel's Diverticulum. H. Drummond, Newcastle-on-Tyne.
26 Primary Sarcoma of Male Urethra. E. G. Mark, Kansas City, Mo.
27 Combination Abdominal Retractor. D. C. Balfour, Rochester, Minn.

18. **Operative Treatment of Simple Fractures.**—There are, says Gibbon, of course certain indications for the open treatment which all recognize and follow, unless they are outweighed by equally positive contra-indications. In the first place, the situation of the bone or the type of the fracture may be a sufficient indication for operation; this is the case in fractures of the patella, in many fractures near a joint, in an epiphyseal separation which cannot be perfectly reduced, in some comminuted fractures, in those where a muscle or tendon or other tissue is interposed between the fragments, where a nerve-trunk has been caught under one of the fragments, and in all fractures where a fair reduction has not been obtained *after the exhaustion of all rational non-operative means.* Emphasis is laid on this last condition. A conscientious practice of the rule of exhausting the nonoperative means of reduction will obviate the necessity of operation in many so-called irreducible fractures.

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19. **Treatment of Simple Fractures.**—Hitzrot believes that that method of treatment which offers the patient the most satisfactory functional result with the least danger should be the method of election in the treatment of the great majority of simple fractures. The method which most nearly fulfils the above requirements is the non-operative reduction of fractures. Operation he would consider not the method of election, but the method of selection for a carefully chosen group of cases, and in selecting the types for operation, each case must be considered a law unto itself.

21. **Osteomyelitis of Long Bones.**—Osteomyelitis of the long bones in children, Homans says, originates in the ends of the diaphyses, rarely as a periostitis. It principally attacks the weight-bearing bones. The early or primary operation demands the removal of bone for purposes of drainage only. The infected medulla should be fully uncovered without doing unnecessary damage to the periosteum or endosteum. Considering the power of regeneration of periosteum plus endosteum, early complete resection of a shaft is not advisable; therefore total resection later should be reserved for cases of total necrosis. The Roentgen ray he would not depend on for diagnosis in the very early stages, but it is invaluable in following the course of the disease.

22. **Diaphragmatic Hernia.**—A history of severe trauma, followed by upper abdominal and left thoracic pains, dyspnea and vomiting, together with physical findings pointing to displacement of the stomach or intestine into the lower left chest and of the heart to the right in Giffin's opinion will ordinarily be sufficient for making a diagnosis of diaphragmatic hernia. If the history and findings be definite, this will be true whether the patient is seen immediately after injury or some time later. Roentgen-ray findings will then be mostly of corroborative value. When, however, the injury has been less severe and the symptoms and signs less definite, and again in most cases of congenital diaphragmatic hernia, radiographic and fluoroscopic examinations must be relied on for a differentiation of the condition. In interpreting the plates (1) a destruction of the definite dome shape characteristic of the normal diaphragm line, (2) the appearance of lung tissue through the gas bubble in the left chest, and (3) the demonstration of bismuth in the colon above the level of the bow line of the chest constitute the most important evidence in favor of hernia of the diaphragm. By fluoroscopic examination the "paradoxical respiratory phenomenon" may be demonstrated.

23. **Disposition of Mesocolon in Gastrojejunostomy.**—Fastening the margins of the opening in the transverse mesocolon to the gastrojejunal suture line by several sutures and neatly tucking the edges underneath so there will be no raw surface to become adherent, Mayo finds an excellent practice and suitable in the large majority of cases. In the occasional case, however, in which the transverse mesocolon is quite fat, there is danger that adhesions will form, and he says this technic should not be adopted in these cases, but rather the old method of suturing to the posterior wall of the stomach three-fourths of an inch away from the gastro-intestinal anastomosing suture line.

Texas State Journal of Medicine, Fort Worth

March, VII, No. 11, pp. 293-348

28 Injuries to Spinal Cord, and Treatment. J. E. Thompson, Galveston.
29 Radical Mastoidostomy; Report of Two Cases. W. D. Jones, Dallas.
30 Sinus Thrombosis as Complication of Mastoiditis. J. H. Foster, Houston.
31 Dallas Epidemic of Meningitis; Laboratory Work. A. E. Thayer, Dallas.

Journal of Medical Society of New Jersey, Orange

March, VIII, No. 10, pp. 503-556

32 Recent Advances in Orthopedic Surgery. J. K. Young, Philadelphia.
33 Use of Cycloplegics and Mydriatics in Ophthalmology. L. Emerson, Orange.
34 Some Practical Points on Diseases of Upper Respiratory Tract. G. C. Stout, Philadelphia.
35 *Study of Alteratives. F. S. Gordon, Blairstown.
36 Lymphangitis. H. Chavanne, Salem.
37 Some Changes in Practice of Medicine Within Past Twenty Years. J. W. Martindale, Camden.

35. **Alteratives.**—It is advised by Gordon to use the alteratives both in health and disease, to give them in minute doses because if given in excess of the body's needs they act as poisons. He says: When a drug is being eliminated by urine, sweat or saliva, it is evidence of an excessive dosage and, unless especially indicated, the drugs iodin and arsenic should not be pushed to physiologic symptoms when a tonic effect is desired. In prescribing these drugs, administer when possible in organic form. Of the foods, spinach and apples contain the most iron; milk, figs, cabbage, lentils and cheese the most lime; cod liver oil, fish and blood, the most iodin; milk, eggs and fish the most phosphates. Until it is shown that cooking does not injure the lime salts in food, milk, cabbage and lentils should be served raw. Lime should be tried in all convulsive disorders, croup, tetany, infantile convulsions, puerperal eclampsia, muscular cramps, etc. In growing children, and in pregnant women, it is wise to investigate diet in order to know if lime is being assimilated in requisite amount. The most promising treatment for chronic alcoholism is that of generously supplying in the dietary all the elemental foods. There is great variation in individual diet. A close study of the dietary history of a patient may at times disclose the cause of an obscure nutritive disorder. To save the teeth of pregnant women, increase the amount of lime and fluorine in the diet. The chemical composition of a tissue sometimes furnishes a clue to therapeutic practice when the tissue is diseased. Parasitism, starvations and poisonings probably include all ills of men. The alteratives in excess are poisons; in normal amounts they are foods.

Journal of Tennessee State Medical Association, Nashville

March, IV, No. 11, pp. 431-471

38 Peritonitis. R. A. Barr, Nashville.
39 Surgical Aspect of So-Called Indigestion. L. L. Sheddan, Knoxville.
40 Diagnosis of Pneumonia in Infancy. O. W. Hill, Knoxville.
41 Anomalies of Amniotic Fluid. J. W. Cox, Johnson City.
42 Cardiac Neuroses. W. J. Matthews, Johnson City.
43 Elements of Insanity. M. Campbell, Knoxville.
44 Treatment of Fractured Femur. J. F. Gallagher, Nashville.
45 Extrauterine Pregnancy. R. Caldwell, Nashville.

Journal of Experimental Medicine, New York

March, XV, No. 3, pp. 205-306

46 *Dog Maintained in Good Health by Parathyroid Autograft W. S. Halsted, Baltimore.
47 *Lesions Produced in Appendix by Oxyuris Vermicularis and Trichocephalus Trichiura. R. L. Cecil and K. Bulkley, New York.
48 *Pregnancy and Chloroform Anesthesia. G. H. Whipple, Baltimore.
49 Histologic Signs of Resistance to Transmissible Sarcoma of Fowl. P. Rous and J. B. Murphy, New York.
50 Production of Antibodies by Tissues Living Outside of Organism. A. Carrel and R. Ingebrigtsen, New York.
51 Experimental Production of Leprosy in Monkey (Macacus Rhesus), with Critical Study of Culture Employed. C. W. Duval and M. Couret, New Orleans.
52 *Bulkhead Suture of Intestine. W. S. Halsted, Baltimore.
53 *Insusceptibility of Pups to Chloroform Poisoning During First Three Weeks of Life. G. H. Whipple, Baltimore.

46. **Dog Maintained in Good Health by Parathyroid Autograft.**—In a paper on the auto- and isotransplantation, in dogs, of the parathyroid glandules the histories of two of the dogs reported in the series of experiments were incomplete, the animals having been kept for further study. One of these dogs was observed for fifteen months and was in good health until the performance of the final operation at which a parathyroid auto-graft too small to be visible to the naked eye was removed. The death of the dog from hypoparathyroidism occurred about three months after the removal of the tiny transplant which was only 0.25 of a millimeter in one diameter and little more than this in the other. The dog lived three months absolutely without parathyroid tissue, so far, at least, as it was possible with the most painstaking search, to determine this fact. Whether or not there was somewhere in the animal's body a particle of parathyroid tissue remaining at the time of its death will, of course, never be known, but it is quite certain, Halsted says, that the removal of an "epithelial body" so small as to be practically invisible produced the almost inconceivable effect described, namely, death from tetany in an animal whose condition prior to the removal of the few cells had been excellent. The dog's organism had, it seems, in some

way accommodated itself to the loss of all of its parathyroid tissue, except the quite invisible remnant in the graft; so that on the removal of this minute fragment, the impression produced was neither so immediate nor so profound as it is after the excision of these glandules in the animal unprepared for their loss.

In confirmation of the story of this dog is that of another dog operated on three times in precisely the same way, on approximately the same dates, and affected in an almost identical manner. The differences observed in the two dogs tend to strengthen rather than weaken the argument which has been advanced. In the second dog both thyroids and all the parathyroids had been removed in two operations, and one parathyroid transplanted extraperitoneally at each of these. But the myxedema became excessive after the removal of the second thyroid lobe (second operation) and remained so to the end of its life a year later. Furthermore, mild symptoms of parathyroid privation persisted throughout, and finally, prolonged and thorough search (third operation) for the parathyroid autograft was negative in result although the sites of the transplantation of these bodies had been accurately recorded. Unfortunately, the nonresistent myxedematous tissues of this dog became infected in the course of the prolonged third operation and death from peritonitis followed so quickly that there was not time for the development of lethal tetany. The slight previous symptoms of hypoparathyroidism became, however, definitely intensified. At the autopsy no accessory thyroid could be found and not a trace of the transplanted epithelial bodies.

47. **Lesions Produced in Appendix by Oxyuris and Trichocephalus.**—In a study of 129 cases of appendicitis in children, Cecil and Bulkley found that in nineteen of them (15 per cent.) the appendix contained *Oxyuris vermicularis* or *Trichocephalus trichiura*. The oxyuris is much the commoner of the two parasites, occurring seventeen times, while the trichocephalus was found only twice. In fifteen out of the nineteen cases, the parasites were associated with a nonsuppurative catarrhal type of appendicitis. If four cases of catarrhal oxyuris appendicitis of adults be included, 83 per cent. of the cases of appendicitis associated with parasites have been of the catarrhal type. In the four remaining cases, the appendix was gangrenous. The cellular changes noted in the catarrhal cases have been, distension of the crypts with mucus, hyperplasia of the lymph follicles, and in some cases, the presence of a few leukocytes in the muscularis and serosa. In thirteen of the nineteen cases (70 per cent.), there have been noted, in addition to the cellular changes, certain lesions in the mucosa, unquestionably produced by the parasite. Of the six cases in which no specific lesions were demonstrated, the extensive gangrene in three of them might have obliterated specific lesions had they been present. Specific lesions were not demonstrated in any one of the four adult cases.

48. **Pregnancy and Chloroform Anesthesia.**—Whipple's experiments raise objections to the use of chloroform in pregnant women where an anesthetic must be continued for half an hour or longer. Chloroform anesthesia may be admissible for the few minutes at the end of the delivery, but when operative measures are necessary, before or after delivery, it is a dangerous anesthetic and surely capable of producing injury to the liver in the manner recognized in the case of normal persons.

52. **Bulkhead Suture of Intestine.**—Since his first report on this subject in 1910, Halsted has improved it by the substitution of paper cones for the licorice rods. Cones of any desired size and thickness can be manufactured in a few minutes by twisting and pasting together narrow strips of paper, one after the other, on a conical form of wood, the latter to be used later as a mandrel. The paper cones are armed, each with a rubber flange or ring cut from a catheter. The operation is then performed as follows: The peritoneal and muscular coats are divided and stripped back on the submucosa far enough to enable the operator to place two ligatures around the gut and to divide between these with the hot knife. To prevent the slipping of these ligatures which are of fine silk, and threaded on straight needles, they are made to engage, but not completely pierce, the submucosa at, say, three or four points before being tied. The paper cone armed with the rubber ring and mounted on the mandrel of wood is carried by the latter into the invagination. When invagination to the desired extent has been made, a ligature of strong silk is tied with force, binding the gut to the cone distal to the rubber flange. Both ends of the intestine having been treated in this manner, they are burned, close to the ligatures, down to and through the paper cones. The invaginated portion of bowel constitutes the bulkhead, the paper cones serving merely to sustain the pressure of the confining ligatures. The blood-supply having been undisturbed is, of course, perfect up to the exact site of the ligature. Precisely at this point the mesentery is transfixed close to the bowel with one of the fine milliner's needles carrying a thread for the circumvection ligature which is to occlude the ultimate little mesenteric vessel. The larger vessels supplying the gut distal to this point are now tied off by circumvection ligatures carried by needles of the kind named. The end-to-end anastomosis is then made with the continuous mattress suture described by Cushing and Halsted, reinforced here and there by an interrupted stitch.

53. **Insusceptibility of Pups to Chloroform Poisoning.**—Employing the liver necrosis as an index Whipple found that pups are immune to the poisonous action of chloroform anesthesia. This immunity or resistance to late chloroform poisoning is complete in the first week, very striking during the second and third weeks, and usually disappears during the fourth week of life. Nests of blood-forming cells (blood islands) are numerous in the sinuses of the liver during the first week and normally become progressively less numerous each week until the liver is almost free from these cells at the end of the fourth week of life. It is considered possible that these leukocytes in the blood islands protect the liver against the specific action of a known poison (chloroform). The mechanism of this hypothetical protective action is not understood, but it may consist of a process of neutralization. Perhaps this protective action against poisons is an important part of the functions of white blood cells and may bear an important relationship to the process of inflammation.

Kentucky Medical Journal, Bowling Green

March 1, X, No. 5, pp. 183-242

54 Acute Spinal Paralysis; Diagnosis and Treatment. J. J. Moren, Louisville.
55 Diagnosis and Treatment of Cerebrospinal Meningitis. J. H. Parker, Corbin.
56 Diseases of Prostate. S. M. Hopkins, Demossville.
57 Gonorrhea and Syphilis. J. J. Rodman, Owensboro.
58 One Year's Experience with Salvarsan. D. H. McKinley, Winchester.
59 Salvarsan; Report of Cases. P. D. Gillim, Owensboro.
60 Animal Experimentation; Its Contribution to Medicine and Surgery. W. E. Senour, Bellevue.
61 Sanitation in Schools. B. Warren, Crab Orchard.
62 Five Months' Experience in Tuberculosis Sanatorium. T. S. Talbott, Bardstown.
63 How to Prevent Tuberculosis. J. H. Hester, Munfordsville.
64 Narcodoulosis (Drug Habituation). J. B. Brasseur, Norway, Mich.
65 Medical Missions. D. O. Hancock, Henderson.
66 House-Fly and How to Get Rid of It. J. H. Peak, Louisville.

New York Medical Journal

March 16, XCV, No. 11, pp. 521-572

67 Colds. A. Jacobi, New York.
68 *Cause of Myopia. W. H. Bates, New York.
69 *Circulation of Cerebrospinal Fluid and Its Bearing on Pathogenesis of Poliomyelitic Disease. S. P. Kramer, Cincinnati.
70 Home Operations. W. F. Burrows, New York.
71 Moderately Contracted Pelvis and Induction of Labor. E. McDonald, New York.
72 *Significance of Group of Hemophilic Bacilli in Conjunctivitis, Especially in Trachoma. A. W. Williams, New York.
73 *Transduodenal Lavage. M. E. Jutte, New York.
74 *Fatigue in Relation to Colds. G. N. Kimball, Poughkeepsie, N. Y.

68. **Cause of Myopia.**—After twenty-five years' study of these cases, experience leads Bates to the conclusion that atropin does not always relax the near focus or relieve functional myopia. A study of the eyes of a large number of individuals in whom functional myopia was produced by an effort, unconsciously or voluntarily, is briefly summarized as follows: An unsuccessful effort of the normal eye to see

accurately new, strange, or unfamiliar distant objects was always followed either by myopic astigmatism, usually—compound myopic astigmatism, occasionally, or simple myopia infrequently. Mixed astigmatism was not observed.

69. **Circulation of Cerebrospinal Fluid.**—Kramer is engaged in an experimental investigation in which it is sought to produce the condition found in acute anterior poliomyelitis by the injection into the spinal subarachnoid cavity of dogs of various poisons. After the injection of morphin, dogs show a motor paralysis of the posterior extremities, sensation remaining intact. This motor paralysis disappears after twenty-four hours. On injecting small doses of dilute hydrocyanic acid, a motor paralysis of the posterior extremities, associated with general convulsions, is produced. The convulsions disappear after an hour; the motor paralysis remains. Such animals have been kept alive for seven days, the motor paralysis persisting, sensation being unaffected. These cords show a degeneration of the motor cells in the anterior horns and a beginning replacement fibrosis.

72. **Bacilli of Conjunctivitis.**—In all, 128 strains of a hemoglobinophilic bacillus have been isolated by Williams and her co-workers from 213 cases and they have as yet not been able to find any distinct differential points between any of them or between their strains and those of *B. influenzæ* as described by others or as studied by them. Williams suggests that the hypothesis that one or more of the group of hemoglobinophilic bacilli is the cause of trachoma explains many other hitherto unexplainable phenomena of this disease: (1) Its irregular onset; (2) its insidious course; (3) its variable contagiousness with its exacerbations of secretion; (4) the continued presence of trachoma in certain districts where helping causes are present, etc. Naturally suitable monkey inoculations would in all probability be all that is necessary for proof or disproof.

73. **Transduodenal Lavage.**—The modus operandi employed by Jutte is as follows: After swallowing the duodenal tube to a point about 20 cm. beyond the mark which indicates the distance from mouth to pylorus, the patient lies down on his right side and drinks about 100 c.c. of water. This position very soon brings the heavy end of the tube near the pylorus, while the peristalsis of the stomach propels the water onward and carries along with it the end of the tube. On turning on the faucet, part of the water swallowed and some secretion are aspirated into the flask. If the reaction is acid, the end of the tube is likely to be still in the stomach; if alkaline, it is in the bowel, except when regurgitation of duodenal secretion into the stomach has taken place. Hyperacidity is apt to cause delay in the opening of the pylorus, which may be overcome by giving some sodium bicarbonate.

For irrigation of the bowel, Jutte disconnects the apparatus on reaching the duodenum, and attaches the catheter tube to an irrigator containing about 1,500 c.c. of a solution of 1 to 1,000, made with sapo medicatus to which is added 14.5 grams of sodium chlorid which, to some extent, prevents rapid absorption of water and allows of the flushing out of still lower segments of the intestinal tract. While the fluid runs in, the patient lies on his back and receives abdominal massage to make the cleansing process more effective. After the treatment he rests awhile and is then directed to rise slowly. Within an hour he usually has a copious movement.

74. **Fatigue and Colds.**—Fatigue is the outward and visible sign of an inward and active poison or toxemia, and that toxemia means lessened resistance to colds, as well as to many other morbid invasions. Rest, local disinfections, and stimulation by proper food and air, Kimball suggests as the royal roads to avoiding as well as curing colds.

Journal-Lancet, Minneapolis, Minn.

March 1, XXXII, No. 5, pp. 113-140

75 *Prevention and Treatment of Ventral Hernia. E. S. Judd, Rochester, Minn.
76 Hospital of University of Minnesota; Its Economic and Educational Value. C. L. Greene, St. Paul.
77 Bone-Formation in Abdominal Cicatrix Following Laparotomy. C. L. Sherman, Luverne, Minn.
78 Laryngeal Papilloma and Subperitoneal Pedunculated Fibroid. A. A. Law, Minneapolis.

75. Also appeared in *Surgery, Gynecology and Obstetrics* for February, 1912.

Boston Medical and Surgical Journal

March 14, CLXVI, No. 11, pp. 399-438

79 *Continuous vs. Interrupted Hospital Service. R. H. Fitz, Boston.
80 Nursing and Public Health. A. Nutting, New York.
81 *Outdoor Treatment of Puerperal Infection. E. B. Young and J. T. Williams, Boston.
82 *Tubercular Epididymitis; End-Results of Seventy-One Cases. J. D. Barney, Boston.
83 Bone Lesions Accompanying Chronic Leg Ulcers. W. P. Coues, Boston.
84 Disappearance of Ovarian Tumor After Vesicular Mole. S. Rushmore, Boston.

79. **Hospital Service.**—In brief, the question of the introduction into hospitals of a continuous or an interrupted service seems to Fitz to depend, first, on the source from which the hospital derives its funds, that is, from endowment or taxes. Although all hospitals are for the immediate benefit of the sick, in a civic hospital opportunities for teaching and research must be subordinate. They are called for and justified on the ground that through them a better grade of physician and surgeon can be secured for the hospital and can be developed in it. The endowed hospital is less urgently called on than the civic hospital to maintain an interrupted service, for taxpayers are justified in the demand that it is more important for them to have many well-trained practitioners at their call than fewer but more highly trained physicians and surgeons. In endowed hospitals, unless thoroughly identified with teaching, a combination of continued and interrupted services, open only to competition through merit, offers more favorable opportunities for more highly trained practitioners and producers than a continuous service alone. An endowed hospital so situated and so controlled as to place research, teaching and the care of the sick on an equal plane, and able to induce the exceptionally qualified man, wherever he may be found, to assume charge of these threefold interests, should come to such terms with him as to control of service, appointment of assistants, equipment and salary as would urge him to relinquish all but the most exclusive practice and thus assure his acceptance of a position which necessitates leadership.

81. **Outdoor Treatment of Puerperal Infection.**—According to the authors, the outdoor treatment has reduced the mortality of severe puerperal infections by nearly 20 per cent. This treatment they believe probably exerts its action chiefly by increasing the amount of hemoglobin in the blood, therefore, sunlight is probably quite as important as fresh air. Curettage, they hold, is contra-indicated in puerperal infection, because it increases the mortality nearly 10 per cent. A single intra-uterine douche of sterile salt solution should be the only local treatment. Antistreptococcic serum and vaccines have proven of much value.

82. **Tubercular Epididymitis.**—Of these seventy-one cases, twenty-two were personally examined by Barney on one or more occasions, forty-one were seen by others, while eight were followed by letter only. Twenty-six patients were seen after unilateral operation and without involvement, when seen, of the opposite side; twenty-three returned as reentries to the hospital with infection of the second epididymis; twenty were examined after bilateral operations. Of the two remaining, one was seen by Barney before and after a subsequent double epididymectomy, while the other case is still unoperated. In Barney's opinion these results show that orchidectomy is no more curative than epididymectomy, and, except in rare instances, is an unjustifiable procedure; 76 per cent. of those operated on are now in good condition, in spite, in some cases, of the presence of tuberculosis; 51 per cent. had definitely gained weight, while in 17 per cent. there was no change, in other words, no loss of weight.

Bulletin of Johns Hopkins Hospital, Baltimore

March, XXIII, No. 253, pp. 65-96

85 Proteins. A. Kossel, Germany.
86 Pathology of Fat Metabolism. F. M. Hanes, New York.
87 Samuel D. Gross: America's Foremost Surgeon. C. W. G. Bohrer, Baltimore.

Journal of Michigan State Medical Society, Battle Creek

March, XI, No. 3, pp. 151-210

88 Nitrous Oxid-Oxygen Anesthesia. R. R. Smith and R. Mauritis, Grand Rapids.
89 *Physostigmin Combined with Morphin in Treatment of Pain Following Abdominal Operations. B. R. Schenck, Detroit.
90 *Colioptotic Constipation. L. J. Hirschman, Detroit.
91 Fever of New Born. E. Boise, Grand Rapids.
92 Puerperal Infections. A. S. Wheelock, Goodrich.
93 Some Things to Be Remembered in Management of Stricture. A. E. West, Kalamazoo.
94 Office Management of Rectal Diseases, Surgical and Non-Surgical. J. A. McVeigh, Detroit.
95 Results of Treatment at Michigan State Sanatorium. E. B. Pierce, Howell.

89. Abstracted in THE JOURNAL, Oct. 21, 1911, p. 1392.

90. Abstracted in THE JOURNAL, Oct. 28, 1911, p. 1484.

Medical Record, New York

March 16, LXXXI, No. 11, pp. 501-550

96 Importance of Disease in Plant and Animal Evolution. R. G. Eccles, Brooklyn.
97 Relation of Pelvic Disease in Women to Osteoarthritis. W. A. N. Dorland, Chicago.
98 *New Antiserum for Cancer. W. N. Berkeley and S. P. Beebe, New York.
99 Clinical Accounts of Thirteen Cases Treated with New Antiserum for Malignant Disease. W. M. Ford, New York.
100 Beriberi. V. G. Heiser, Manila, P. I.
101 Schools for Midwives. I. S. Wile, New York.
102 Treatment of Eczema Rubrum of Lower Extremities. P. E. Bechet, New York.
103 Malaria in Infant Five Months Old, Simulating von Jaksch Anemia. A. C. Henderson, New York.
104 *Family Fatalities; Heredity, Environment or Accident? W. S. Mills, New York.
105 Foreign Bodies in Vagina. W. J. Robinson, New York.
106 The Autopsy; a Letter to the Public. R. Stein, New York.

98. **New Antiserum for Cancer.**—What has so far been accomplished by Berkeley and Beebe may be stated as follows: By successive injections of a specific human cancer extract (the cancer being partially removed by operation) into an alien mammalian species it appears that a serum may be developed which, when injected intramuscularly, or better, intravenously, in increasing doses into the original host, is followed by rapid regression and disappearance of the remains of the tumor. There is a strictly quantitative relation between the amount of serum used and the amount of tumor which may be made to disappear. No ill effects have been so far observed from the injections of the serum (16 cases), except local swelling and the anaphylactic fever and vasomotor disturbances noted after giving an equal amount of normal foreign serum. Present clinical results are briefly as follows: Sixteen cases of malignant disease in all stages of advancement have been treated in the last nine months. A microscopic diagnosis was made in all but three cases. Fifteen were cancer and one was sarcoma. Nine received stock serum, one received autogenous serum after a secondary operation, six received autogenous serum after a primary operation. Of the nine patients receiving stock serum two were moribund when first seen, and died quite uninfluenced by the injections; another, having cancer of the esophagus, was remarkably benefited for several weeks; one, with an immense cancer of the tonsil, was somewhat benefited temporarily. One very extensive primary cancer of the bladder has not been recently heard from, but was probably not benefited. Of two immense cancers of the stomach, one was entirely unaffected, one slightly improved. One patient (breast case), after two months of injections, is nearly well and in excellent general condition. Another case (uterine cancer recurrent in the bladder) recovered promptly and has remained entirely well for four months. In one far advanced breast case receiving a small amount of autogenous serum after a secondary operation, the patient was greatly improved, but subsequently died of intercurrent acute disease. Of the patients receiving autogenous serum after a primary operation one is still under treatment, greatly improved; the others have had no recurrence within a period ranging from three to six months. The present impression of the authors is that autogenous serum is much more effective than stock serum. It is believed that the great field of usefulness of the new serum will be to prevent the recurrence of malignant tumors removable in the early stages by operation. There is no indication from present experience that large inoperable cancers and sarcomas will be amenable to the serum treatment. Treatment, to be effective, must be early if there is to be any reasonable quantitative relation between tumor and antibody.

104. **Family Fatalities.**—Mills recounts instances of burning, drowning, deaths by accident or by murder, occurring repeatedly in families, and asks on what basis such curious happenings may be explained. He says that the fact remains if the deaths had been caused by the same disease, heredity or family predisposition would have been put forward as the cause. What is the underlying cause that makes similar accidents happen to different members of the same family?

Lancet-Clinic, Cincinnati

March 2, CVII, No. 9, pp. 229-262

107 Eradication and Prevention of Bubonic Plague. W. C. Rucker, Washington, D. C.
108 Pellagra; Study in Epidemiology. R. M. Grimm, U. S. P. H. and M.-H. S.
109 Treatment of Cerebral Hemorrhage. E. M. Hummel, New Orleans.
110 Importance of Proper Feeding After Celiotomy. J. H. Carstens, Detroit.

March 9, CVII, No. 10, pp. 263-288

111 Our Social and Moral Scourge. B. L. W. Floyd, Evansville, Ind.
112 Colon Bacillus Infections of Urinary Tract. I. S. Koll, Chicago.
113 How to Fulfil Purposes of Ohio Association of Medical Teachers. H. K. Dunham, Cincinnati.

American Medicine, Burlington, Vt.

February, VII, No. 2, pp. 67-126

114 Diagnosis and Treatment of Kidney Tuberculosis. M. Packard, New York.
115 Transperitoneal Operations on Bladder. P. Syms, New York.
116 Nephrolithiasis. W. Ayers, New York.
117 Hydronephrosis. C. H. Chetwood, New York.
118 Use of Fats in Disorders of Stomach. A. Freeman, New York.
119 Stomatitis in Children. L. Kerr, Brooklyn.
120 Dichotomy, or Division of Fee Between Physicians. W. W. Vinnedge, Lafayette, Ind.
121 Digitalis or Digitalin? W. F. Waugh, Chicago.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

Omitted from February Number

122 Causes of Appendicitis. G. K. Dickinson, Jersey City, N. J.

March, LXV, No. 411, pp. 393-556

123 The Midwife. A. B. Emmons and J. L. Huntington, Boston.
124 Preparation of Patient Before Operation. H. Grad, New York.
125 Childbirth in Elderly Primipara. K. C. Spain, St. Louis.
126 Blood-Pressure in Pregnancy. C. H. Judd, Detroit.
127 Three Cases of Antepartum Eclampsia with Conservative Treatment. C. E. Ferguson, Indianapolis.
128 Relation of Vaginal Hysterotomy to Problem of Rapid Vaginal Delivery. A. Hussey, New York.
129 Nervous Phenomena as Sequelæ of Changes in Pelvic Viscera. C. N. Ballard, Oklahoma City, Okla.
130 Symptomatology of Infantile Paralysis. J. V. Manning, Brooklyn.
131 Interpretation of Unusual Types of Poliomyelitis. T. A. Williams, Washington, D. C.
132 Prune-Juice Vomiting as Symptom in Cyclic Vomiting in Children. R. S. Morris, New York.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Practitioner, London

March, LXXXVIII, No. 3, pp. 353-488

1 *Anemic Vomiting. A. P. Beddard.
2 Some Appliances of Use to General Practitioner in Treatment of Diseases of Throat, Nose and Ear. J. D. Grant.
3 Four Hundred Operations Involving Peritoneal Cavity. J. D. Malcolm.
4 Analysis of 500 Operations Performed Under Influence of Spinal Analgesia by Use of Stovain-Glucose Solution. L. McGavin and R. D. O'Leary.
5 *Congenital Hypertrophic Stenosis of Pylorus in Infancy. C. P. Lapage.
6 *Causation and Treatment of Dislocation of Ulnar Nerve from Anatomic Standpoint. C. Woodward.
7 Inunction Treatment of Syphilis as Carried Out at Foreign Spas. D. Freshwater.
8 Morbid States Produced by Chronic Movable Kidney. P. Hicks.
9 *Relation of Chorea to Rheumatism; Analysis of 300 Cases. M. S. Fraser.
10 Minor Accidents in General Practice. M. C. S. Lawrence.
11 Case of Simple Obstructive Jaundice with Huge Dilatation of Common Duct. C. E. L. Burman.
12 Cerebellar Tumor Causing No Symptoms Till Shortly Before Death. A. E. Crabbe.
13 *Auto-Serum Treatment of Ascites; Cirrhosis of Liver in Infant. M. Lahiri.

1. **Anemic Vomiting.**—Four cases of anemic vomiting are cited by Beddard occurring in women. He says such patients

are liable to severe attacks of epigastric pain and vomiting, which may be mistaken for gastric perforation and frequently for gastric ulcer. The symptoms of anemic vomiting are pain in the epigastrium and vomiting. Almost everything placed in the stomach gives rise to the pain, which is relieved by the vomiting. The symptoms point to hyperesthesia of the mucous membrane of the stomach, which in turn is due to dilatation of the heart. An active stretching of the cardiac muscle is a common process in anemic girls, especially when they have to do comparatively hard work. This process is frequently associated with severe pain and tenderness referred to two parts of the body: (a) The skin and muscles under the left breast. Many of these patients complain of this pain; in others the tenderness is demonstrated only by firm palpation. There is, of course, nothing the matter with these structures, although they may be so tender that the patient cannot bear her clothes to touch them. (b) The mucous membrane of the stomach. This may become so hyperesthetic that whatever touches it causes pain and the stomach empties itself. If pain is thus referred from a stretching heart to the stomach, it follows that anything which suddenly increases the stretching process will increase the pain in the stomach and lead to vomiting. Therefore, in anemic vomiting, exertion, like running upstairs, is liable to bring on just the same pain and vomiting as food does; if the exertion is long and arduous, the attacks of pain and vomiting may be so severe as to roughly simulate perforation of the stomach.

Beddard says that these very severe attacks, which may induce the unwary to open the patient's abdomen, are in many respects comparable to the gastric crises of locomotor ataxia. In both conditions pain is referred to the mucous membrane of a stomach which may in itself be perfectly healthy, and yet the hyperesthesia of the stomach may be so great as to lead to severe and prolonged attacks of vomiting; of course, the ultimate cause of the pain in the two conditions is different. The treatment comprises absolute rest in bed, diet, 2 drops of Fowler's solution three times a day. To this may be added at once, or in the course of a few days, 10 grains of citrate of iron and ammonia.

5. **Stenosis of Pylorus in Infancy.**—The actual medical treatment of stenosis of the pylorus in infancy is outlined by Lepage: 1. Carefully regulating the feeding, with easily digested foods, which leave no residue and have the greatest chance of passing the pylorus. Small feedings given frequently are necessary, and 1 ounce every hour, or even teaspoonful feeds very frequently, will be found the best in the early stages. As the child improves and the vomiting ceases, larger amounts at longer intervals may be given. Peptonized milk, whey and albumin water, meat juice and other foods may be tried. A change in the food may lead to a temporary improvement, but the vomiting soon becomes as bad as ever. 2. Gastric lavage, which is a very important part of the treatment, partly because it empties the stomach regularly without causing nearly so much strain as does vomiting, and partly because it soothes and cleans the gastric mucous membrane. 3. Want of fluid naturally follows on the excessive vomiting. It is no good pouring fluid into the stomach, because, Lepage says, it only adds to the dilatation; on the other hand, rectal salines or infusion can and should be used without hesitation. If the large intestine is irritable, or if there is much evidence of want of fluid in spite of rectal salines, infusion with normal saline should be used. The value of feeding with nutrient enemata is doubtful, but in some cases there does seem to have been some improvement, and from the nature of the returned stools a certain amount of digestion seemed to have taken place. Inunction with cod-liver oil may do good, and brandy is also very useful, both to keep up the strength and from the medicinal effect it seems to have in aiding digestion. Drugs are not of much value. In the cases of gastric spasm, antispasmodics may have a very good effect and small doses of tr. opii or belladonna should certainly be tried.

6. **Dislocation of Ulnar Nerve.**—The method employed by Woodward in one case to prevent the dislocation of the nerve was as follows: The incision was slightly curved in order that the suture-line should not overlie the nerve. A flap of the deep fascia forming the aponeurosis over the common flexor origin was dissected inward and slightly upward, from off the underlying muscles, right up to the very tip of the internal condyle. The flap, which was about a third of an inch in breadth and rather more than 1 inch in length, was then turned back and stitched with fine silk to the inner margin of the triceps tendon near its insertion and to the lateral aspect of the olecranon itself in its upper part. The ulnar nerve itself was not interfered with in any way. The skin incision was closed and the arm put up in the extended position. The stitches were all removed by the eighth day. On flexing the elbow the nerve no longer slipped forward over the condyle, nor did it show up as prominently as before. He has had no recurrence of the trouble, and his work, that of wire-drawer, causes him no inconvenience.

9. **Chorea and Rheumatism.**—From the analysis of 300 cases, Fraser is convinced that the majority of cases of chorea are closely associated with rheumatism, and that possibly all cases of true chorea are rheumatic in origin. He says that the fact that almost all cases of chorea examined post mortem show endocarditis may be fairly taken as very strong evidence in favor of the rheumatic theory of chorea.

13. **Treatment of Ascites.**—Lahiri's patient, a child of 18 months, had been ill for eight months with a hard, enlarged liver (2½ inches below the costal arch). Medical treatment gave symptomatic relief, but the enlarged liver and ascites were still present. Following the experiment of Audibert and Monges, Lahiri injected 0.5 c.c. of the child's serum into the cellular tissue of the flank. The urine began to increase in frequency next day and continued for four or five days. On the eighth day the second injection was given, this time 1 c.c. being used. Thus continuing, the last injection, which was received six weeks after the first, was 2 c.c. and has apparently cured the little patient. The enlargement of the liver and that of the spleen are gone; the urine is almost normal. The child has been allowed to eat bread and pulse and is thriving.

Sei-I-Kwai Medical Journal, Tokyo

February 10, XXXI, No. 2, pp. 115-130

14 *First Report on Action of Phenyl Urea. H. Sewaki.

14. **Action of Phenyl Urea.**—Phenyl urea is a derivative of urea, made by Sewaki in the beginning of 1911. The present report is only a preliminary part of his studies. It embraces the study, first, on the properties of phenyl urea; second, on the action of phenyl urea on animals; third, on the habitude of phenyl urea; fourth, on the absorption and excretion of phenyl urea; fifth, on the effect of phenyl urea on strychnin; sixth, comparative study of the action of urea, anilin and phenyl urea on the mouse. Phenyl urea is a light, brownish, white fluorescent crystal; soluble in boiling water, alcohol and ether. The melting point is 146 C., molecular weight 125. Its structure is C_6H_5-NH-CO-NH_2; it has a neutral reaction. In small doses, it affects only motor centers; in large doses motor and sensory nerve centers are affected as well. When a maximum dose is used the affected animal falls into deep sleep and awakes four to ten hours afterward, without any ill effect. During sleep the cardiac and respiratory centers are not interfered with. Repeated injections of phenyl urea induce accumulation to a very slight extent. Phenyl urea has a power to restrain strychnin convulsions.

Australasian Medical Gazette, Sydney

January 13, XXXI, No. 2, pp. 25-48

15 Importance of Lumbar Puncture in Plumbic Ocular Neuritis of Children. J. L. Gibson.
16 Mosquitoes and Disease. R. Dick.
17 Case of Successful Removal of Cerebral Tumor from Right Parietal Cortex. R. H. Marten.
18 Infantile Diarrhea and Its Treatment. H. A. Ellis.

January 20, XXXI, No. 3, pp. 49-76

19 Feeble-Minded; Classification and Importance. H. Sutton.
20 Position and Needs of the Profession. W. Dalsh.
21 *Unique Case of Rupture of Common Bile Duct. O. F. Paget.
22 Snake Bite. E. Florence.

January 27, XXXI, No. 4, pp. 77-100

23 Paramyclonus Multiplex Epilepticus of Unverricht. J. C. Verco.
24 Proposed Technic for Prevention of Dengue Fever and Filariasis. T. L. Bancroft.

25 Some Meeting Points of Obstetrician and Surgeon. W. T. Chenhall.
26 Retroversion of Uterus and Rupture of Intestine. G. S. Samuelson.

February 3, XXXI, No. 5, pp. 101-124

27 Medical Politics. R. Bowman.
28 Operative Treatment of Retrodisplacements of Uterus. J. A. G. Hamilton.
29 Alcoholism and Suggestion, with Two Extreme Cases. J. Boyd.
30 Pulsating Tumor of Nasopharynx Removed by Moure's Operation. O. Smithson.

February 10, XXXI, No. 6, pp. 125-148

31 Fatal Reflex Syncope During Chloroform Anesthesia. A. J. Turner.
32 Postoperative Cardiac and Pulmonary Embolisms. P. T. Thane.
33 Romance of Medicine. J. W. B. Bean.
34 Death During Thyroidectomy. G. R. Ward.

21. **Rupture of Common Bile Duct.**—Paget's patient was run over by a sulky. The liver had been apparently torn from its suspensory ligament and rotated forward, its superior surface becoming an anterior surface, and allowing the closed fist to be easily accommodated between the liver and diaphragm. The anterior edge of the liver was found flattened out like a ribbon some inch and a half wide, and was adherent to the transverse colon. The gall-bladder, adrift from the liver, hung by a pedicle consisting of its duct, and, obviously, its blood-supply, since there was no appearance of gangrene. The line on the liver whence it had been torn away was distinctly visible. The point of leakage of bile was located in the main duct in the hepatoduodenal ligament. During the efforts made to dissect out the duct the patient's condition became so serious as to necessitate finishing the operation. A large rubber tube, containing gauze, was therefore passed down to the region of the tear, and the abdomen closed. The patient was barely resuscitated by subcutaneous salines, pituitary hypodermically, etc., before being taken off the table. The gall-bladder was suspended to the liver in its proper position by a single gut suture, with the idea of making it easy to find at a second operation.

The second operation was performed, and everything differed from the expected. (1) The liver had regained its normal position and was adherent to the diaphragm; (2) the gall-bladder had again come adrift and was nowhere to be found; (3) of course, there were many adhesions from drainage, tube tracts, etc. The gall-bladder, completely retroverted on its pedicle, and, disguised by liver-colored adhesions, was ultimately found adherent to the posterior surface of the liver. It was quickly sutured to the colon, and the abdomen closed with a rubber drainage tube.

There are many interesting points in this case: (1) The result of a practically aseptic rupture of the common duct, which allowed no bile to enter the intestine, but let it accumulate in the peritoneal cavity was limited to (a) intense emaciation, (b) jaundice. All other symptoms were secondary to pressure. The temperature had been normal. (2) The presence of fluid in the closed abdomen apparently checked the formation of adhesions. (3) As a result of paracentesis, the temperature shot up to 103 F., and then returned to normal. (4) After the first operation, which was practically a mere draining away of bile from the abdominal cavity, the temperature was immediately typical of a mild septic case, ranging the first week between 102 F. and normal, the second week 101 F. and normal. There was absolutely no evidence of peritonitis or sepsis. Within twenty-four hours of operation the patient was fed freely. There was never any vomiting, and the bowels acted within twenty-four hours without medicine. A small degree of swelling at the lower end of the wound was at the second operation found to be blood extravasated, where the muscle had been divided. It was partially organized as white clot, and in no degree purulent. (5) In spite of jaundice, there was no hemorrhage at either operation, and no ligature to the vessels was used. (6) The fact that the gall-bladder and duct can be freely separated from the liver without fear of gangrene is of value in gall-bladder surgery. (7) Hypodermic injections of pituitary gland were given for days and weeks. They unquestionably prevented the patient from dying. (8) The patient's collapse at operation was appalling, and only equalled by his rally-power. After both operations he was fed as often as possible, immediately after recovering from the anesthetic. He never vomited.

Lancet, London

March 2, IX, No. 4618, pp. 557-628

35 Glycosuria. A. E. Garrod.
36 Significance of Symptoms in Cases of Duodenal Ulcer. C. M. Moullin.
37 Differential Diagnosis of Certain Infectious Diseases. F. Thomson.
38 Cystitis; Its Causes and Treatment. D. Newman.
39 Volvulus Coincident with Strangulated Hernia. F. Fraser.
40 Vaginal Pessary Retained for Twenty-Nine Years. A. C. Butler-Smythe.
41 Two Cases of Pneumonia Treated with Pneumococcus Vaccine. G. P. Jones.
42 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

Australian Medical Journal, Melbourne

January 13, I, No. 26, pp. 273-284

43 Seven Years' Experience of Value of Roentgen-Ray and Electro-Therapeutics. S. Argyle.
44 Cause and Treatment of Summer Diarrhea in Children. A. J. Wood.
45 *Case of Cirrhosis of Liver with Recurring Ascites Treated by Drainage into Subcutaneous Tissues. J. E. Piper.

January 20, I, No. 27, pp. 285-296

46 Report of Investigation in Syphilis Made in Melbourne from June 1, 1910, to May 31, 1911. K. Hiller.
47 Treatment of Summer Diarrhea. H. D. Stephens.
48 Etiology of Infantile Diarrhea. R. L. Forsyth.

January 27, I, No. 28, pp. 297-308

49 Laceration of Cervix. G. Horne.
50 Pneumonia Simulating Perforation in Convalescing Typhoid Patient. W. R. Groves.
51 Doctrine of Complexes. C. G. Jung.

February 3, I, No. 29, pp. 309-320

52 Talbot Milk Institute. A. J. Wood.
53 Case of Popliteal Aneurysm; Obliterative Endoaneurismorraphy. R. S. Cross.

45. **Cirrhosis of Liver with Recurring Ascites.**—The abdomen of Piper's patient was tapped and 350 ounces of fluid drawn off. On examination it was then found that her liver extended a handsbreadth below the costal margin. No definite nodules could be felt. No spleen palpable. A partial Wassermann reaction was obtained. During the next three months paracentesis abdominis was performed eight times, and altogether 1,978 ounces of ascitic fluid was thus removed. Medical treatment proved ineffective. An elliptical incision was made over the crural canal. The femoral and saphenous veins were isolated and protected from injury, and the crural canal exposed. Next, an incision was made in the right semilunar line, the center of the incision being opposite the anterior superior-iliac spine. On opening the abdomen a large amount of ascitic fluid escaped, but no attempt was made to empty the abdomen of fluid. Then, through his femoral incision he cut down on his finger, cutting the peritoneum in such a way as to make three small flaps. A stout piece of silk was then passed through each flap and its neighboring ligament and tied, leaving both ends of each ligature about 9 inches long. Each pair of these ends was then threaded at the same time through the eye of a long seeker, and this instrument passed down the thigh subcutaneously until the silk was unthreaded and left there. The three pairs were put in different directions radiating from the crural canal. The crural ring was then stitched up with silk, leaving a small opening so as to permit drainage from the abdominal cavity. The femoral incision was then closed. Through the abdominal incision several sutures were put in uniting the omentum to the parietal peritoneum. Next the end of the omentum was brought through the incision into the subcutaneous tissues of the abdominal wall and fastened by a suture to the abdominal aponeurosis. The abdominal incision was then closed. For several days some ascitic fluid came through both incisions, but ceased at the end of a week. Between the day succeeding the operation and the day of her discharge the patient's measurement at the level of the umbilicus fell from 27½ inches to 26 inches. The patient walked out of hospital feeling greatly improved and without a trace of ascites.

British Medical Journal, London

March 2, I, No. 2670, pp. 469-528

54 Pruritus Vulvæ; Its Etiology and Treatment. R. A. Gibbons.
55 Retroversion of Uterus. W. J. Gow.
56 Four Successful Cases of Cesarean Section. C. Y. Pearson.
57 Diagnosis of Ectopic Pregnancy. R. Davies-Colley.
58 Albuminuria in Pregnancy. H. M. Raven.
59 Chicken-Pox During Puerperium. B. Myers.

Annales de Gynécologie et d'Obstétrique, Paris

February, XXXIX, No. 2, pp. 65-128

60 Prophylaxis and Treatment of Prolapse of the Uterus. (Traitement du prolapsus utérin.) Potocki. Commenced in No. 1.
61 *Acute Dilatation of the Stomach in Parturients. (La dilatation aigue de l'estomac chez les accouchées.) Audebert.

61. Postpartum Acute Dilatation of the Stomach.—Audebert reports two cases personally observed and summarizes ten similar ones from French literature. In the latest of his own cases the patient had suffered from uncontrollable vomiting during the pregnancy, labor had been long and difficult and it is possible that the stomach had been injured by the traumatism occasioned by expression of the placenta, and possibly also by the chloroform given. In four of the total cases the change to the ventral decubitus put an end almost at once to the syndrome. Chloroform had been given in eight of the total twelve cases and Audebert thinks that the old idea as to the harmlessness of chloroform for parturients will have to be abandoned. In seven cases other predisposing causes were evident, streptococcus infection, gastric ulcer, eclampsia or exhaustion from difficult labor.

Archives des Maladies du Cœur, etc., Paris

February, V, No. 2, pp. 81-160

62 Determination of Arterial Pressure. (Baisse systolique de la tension artérielle au moment de la mensuration. Technique et notation sphygmo-manométriques.) L. Gallavardin and J. Haour.
63 Aneurysm of Sinus of Valsalva. (Anévrysme du sinus de Valsalva à développement intracardiaque associé à des lésions d'aortite syphilitique.) C. Roubier and H. Bouget.
64 Pneumococcus Endocarditis. (Endocardite ulcéro-végétante à pneumocoques de l'orifice aortique et de l' "undefended space.") N. Flessinger and L. Roudowska.

Bulletin de l'Académie de Médecine, Paris

February 20, LXXVI, No. 8, pp. 127-148

65 Swallowing of Air and Eructation in Man and Horse. (Pathologie comparée des diverses variétés d'aérophagie et de leur bruit éructant chez l'homme et chez le cheval.) Pécus and G. Hayem.
66 *Diverticulum of Meckel Opening Into the Umbilicus. (Persistance du diverticule de Meckel ouvert à l'ombilic.) E. Kirmisson.

66. Diverticulum of Meckel Opening Into the Umbilicus.—An infant nearly a month old was operated on for this deformity, the diverticulum acting as an artificial anus. After excision of the diverticulum normal conditions were restored. This is the second case of the kind in which Kirmisson has operated. The importance of such cases lies in the possible accusation of the physician that he had tied a loop of intestine in with the umbilical cord. This is disproved by the lack of signs of strangulation as would have to be the case if there were incarceration of a loop. In two other cases on record the infants were less than a month old, and they all bore the operation perfectly, confirming the remarkable way in which very young infants bear major operations.

Journal de Chirurgie, Paris

January, VIII, No. 1, pp. 1-112

67 .Technic for Operations for Cleft Palate. (Technique de l'uranostaphylorraphie.) L. Ombrédanne.

Journal de Médecine de Bordeaux

February 11, XXIV, No. 6, pp. 81-96

68 *Excessive Uterine Hemorrhages at Puberty. (Sur un cas de metrorragies de la puberté.) A. Venot.
69 *Necrosis of the Jaws from Mercurial Salve Applied to Burn. H. L. Rocher.

68. Uterine Hemorrhages at Puberty.—Venot discusses the causes of incessant uterine hemorrhages at puberty, relating the case of a girl of 16, whose first menstruation came on suddenly without warning and was extremely profuse, lasting for three days. On return of the menses two months later, the hemorrhage persisted for two weeks and returned after a few days, the intervals growing less until finally there was daily hemorrhage. The girl had previously been robust and came of a healthy family. After exclusion of chlorosis, hemophilia, myxedema and leukocythemia, malaria and a cardiovascular or kidney affection, the uterus was examined and found soft and somewhat enlarged and was easily dilated with bougies and curetted; the mucosa showed signs of inflammation. No evidences of tuberculosis were found, and after the curetting all disturbances ceased and menstruation since has been normal. There had never been any pain at any time and nothing was found to explain the metritis, no vulvovaginitis or stenosis of the cervix or displacement of the uterus. There must have been some slight unnoticed infection in the region, possibly years before, predisposing the uterus to hemorrhage when it learned to bleed. Before attempting to curet, Venot applied persevering internal measures, repose, copious injections of hot water through a small catheter and under low pressure, sitz and other baths. Pain can be combated by large cataplasms to the abdomen, hot moist packs and injections with a little laudanum. When these measures fail after a thorough trial, one is justified in curetting.

69. Mercurial Necrosis of the Jaws.—A little girl of 5 had been burnt on the buttocks and the extensive burnt area was treated with a salve containing 0.1 per cent. mercuric chlorid, 1 per cent. iodoform and 3 per cent. iodol. Mercurial stomatitis appeared in two months and progressed to necrosis of large parts of both jaws on the right side.

Lyon Médical, Lyons

February 11, CXVIII, No. 6, pp. 281-352

70 *Percussion Sign of Typhoid Fever. (La submatité de la base droite—submatité rétro-hépatique—signe de fièvre typhoide.) C. Lesieur.
71 *Operative Treatment of Hemorrhagic Pachymeningitis. G. Gayet.

70. Percussion Sign of Typhoid Fever.—The sign to which Lesieur calls attention is an area of relative dulness on superficial percussion of the back over the right base of the thorax, indicating congestion and enlargement of the liver. The dulness was noted by the fourth day in some of his cases. In the few cases in which positive findings were obtained into convalescence, the patient almost always had a relapse later. In two cases recently of febrile, nodose erythema, the finding was positive and Lesieur's confidence in it began to waver until the course of the case showed that there was associated typhoid. The sign was constant in 90 per cent. of 300 typhoid patients of both sexes. The subsidence of the dulness presages the approach of convalescence. The persistence of the dulness, on the other hand, warns to be extra careful in the diet as the patient is still in a precarious condition. In these conditions he has found hexamethylenamin a valuable means for *antisepsie hépatobiliaire*, as he calls it.

71. Hemorrhagic Pachymeningitis.—Gayet reviews four cases on record in which operative treatment of a nontraumatic hematoma of the dura cured the patients; he also cites a fifth case in which the patient succumbed, and reports a case from his own experience in a woman of 53. The signs of pressure on the brain had come on gradually; the temperature was a little above normal and the fluid from lumbar puncture showed no trace of blood. An abscess in the brow six months before was the first sign of trouble, several others forming and opening spontaneously; intense headache became constant, and paresis of the right leg and arm developed, with vertigo and left optic neuritis. A large skin-skull flap was turned back in the left temporal-parietal region but instead of the anticipated abscess only signs of a hemorrhagic pachymeningitis were found with several pockets of serous fluid. Improvement was evident at once, and the patient soon recovered except that an intercurrent frontal sinusitis since has required treatment. The good effects of large exposure of the brain confirm the importance of early exposure and incision of the dura mater in such cases, removing clots and cleaning the dura.

Presse Médicale, Paris

February 17, XX, No. 14, pp. 141-152

72 The Natural Mechanism of the Formation of Albuminoids. (Recherche du mécanisme naturel de formation des albuminoïdes.) L. C. Millard.
73 Hemolysis and Pigmented Cirrhosis of the Liver in a Diabetic of 72. J. Chalier and L. Nové-Josserand.
74 Tuberculin Therapy by Intradermal Route. (La voie intradermique en tuberculinothérapie.) C. Mantoux.

February 21, No. 15, pp. 153-160

75 *Vaccination Against Tuberculosis. (Quelques aperçus nouveaux sur la question de la vaccination contre la tuberculose.) A. Calmette.
76 Fracture of Auditory Canal. (Fracture du conduit auditif externe.) A. Broca.

75. **Prospects for Vaccination Against Tuberculosis.**—Calmette states that none of the methods hitherto in vogue has succeeded in inducing the formation of the durable vaccinating lymph-node lesion which seems to be the indispensable factor for resistance to true tuberculosis later. He reviews them all and compares them unfavorably with the results of his recent vaccination work on cattle which opens brighter prospects. He regards as almost inevitable the contamination of children under 5 with tuberculosis, at least in crowded cities. If this infection remains localized in the lymph-node system —which is generally the case—and if the infection is not too massive, it confers on the child an immunity to reinfection or at least makes it more resistant, so that reinfecting bacilli are not tolerated. The organism then displays a characteristic tendency to expel them at once, while it displays an equally characteristic intolerance for the products of the bacillary secretions (reactions to tuberculin). This resisting power can be measured by quantitative determination of the antibodies in the serum. The antibody index shows that the resistance increases with each new infection—manifested by the greater and greater tendency to rapid, cheesy changes, purulent softening of tubercles and prompt expulsion of their contents. But when reinfection occurs again and again and in massive doses, this constant recurrence of softening and breaking down of tubercles, overwhelming the system with their products, brings the condition of actual phthisis, and the individual finishes by succumbing in spite of, or, rather for the very reason that he had acquired, immunity. These facts point the way to effectual prophylaxis, Calmette thinks. As soon as the tuberculin reaction first reveals that infection has occurred, the child must be protected against reinfection; he has acquired immunity and resisting power enough to carry him through life if he can be protected against massive reinfections. Calmette adds that it is possible to conceive of artificially inducing this primary immunizing lymph-node action by vaccinating very young infants by feeding them some attenuated strain of tubercle bacilli while the intestine walls are still in their primal comparatively permeable condition.

Berliner klinische Wochenschrift

February 19, XLIX, No. 8, pp. 337-384

77 *Diarrhea of Gastric Origin with Stenosis of the Pylorus. (Gastrogene Diarrhöen bei Pylorusstenosen.) J. Boas.
78 *Fracture of Cervical Vertebræ. (Halswirbelbrüche.) E. Sonnenburg.
79 *Exclusion of Bladder. (Die Ausschaltung der Blase bei schweren Formen der Blasentuberkulose.) L. Casper.
80 Occurrence of Fat and Myelin in Tumors. (Statistischer Beitrag über das Auftreten von Fett und Myelin in Geschwülsten.) I. Haga.
81 Origin of Anaphylatoxin. (Herkunft des Anaphylatoxins.) J. Bauer.
82 Psychic Elements in Asthma. (Die psychische Komponente unter den Asthmaursachen.) M. Saenger.
83 Reaction in Urine of Breast-Fed Infants. (Zur Engel-Tarnau'chen Urinreaktion.) D. v. Balassy.
84 Present Status of Lung Surgery, with Personal Experiences. (Der gegenwärtige Stand der Lungenchirurgie.) A. Fraenkel and W. Körte. Commenced in No. 6.
85 Sensitizing Action of Fluorescent Substances. (Ergänzende Bemerkung zu dem kurzen Referat über die Photodynamische Wirkung fluorescierender Stoffe, von F. Nagelschmidt-Berlin.) H. Raubitschek.

77. **Diarrhea of Stomach Origin with Stenosis of the Pylorus.**—Boas has encountered in the last ten years a number of patients with profuse diarrhea for which no cause could be discovered until the microscope revealed sarcinæ in the feces; this pointed unmistakably to obstruction to the evacuation of the stomach, and the further course of the cases confirmed the stenosis of the pylorus assumed on these findings. The usual signs of stenosis of the pylorus may be entirely absent, and the patients' attention is not directed to the stomach at all. The intestinal symptoms on the other hand suggest a primary bowel affection, especially the painful and offensive flatulence, and profuse diarrhea three or four times a day, but the discovery of the sarcinæ excluded a primary bowel trouble. As a rule, the sarcinæ flourish only with non-malignant lesions, but this rule has its exceptions as he shows by a case in which the sudden onset of the diarrhea and pains in the midst of apparent health except for slight stomach disturbances over a long period, and the signs of typical benign stenosis of the pylorus which then developed proved the manifestations of inoperable pyloric carcinoma. He does not know of any similar case on record in which persisting diarrhea was the first and predominant symptom of cancer at the pylorus. The material reviewed teaches the importance of thorough examination of the entire gastro-intestinal tract with any chronic diarrhea. When the gastrogenic origin is determined, treatment should be the reverse of that advocated for primary bowel troubles. As soon as the diet is modified to reduce stagnation and fermentation in the stomach, with or without lavage, the diarrhea is generally arrested. Boas calls attention anew to the value of the salicylates internally in checking fermentation; 2 or 3 gm. of magnesia salicylate a day, with or without calcined magnesia, has always proved useful in his experience in these cases.

78. **Fracture of Cervical Vertebræ Without Spinal Cord Symptoms.**—Sonnenburg has had two recent cases of this kind, and he emphasizes the importance of roentgenoscopic control and the necessity for shielding such patients from hard work, possibly for a year, as otherwise there may be serious damage from resumption of work before consolidation is complete. Boeckel has recently compiled ninety-five cases of the kind, including fourteen previously unpublished. Isolated fracture of the body of the vertebra occurs most frequently and a sliver of bone may be felt through the mouth in the pharynx. Extravasation of blood may compress the cord for a time, causing paralysis, but as the blood is absorbed the paralysis retrogresses.

79. **Exclusion of the Bladder for Severe Local Tuberculosis.**—Casper remarks that Legueu and Willems seem to have been the only ones to date who have published cases of tuberculosis of the bladder so severe as to compel diversion of the urine. They accomplished this by nephrostomy, but Casper thinks that the danger of complications is much less and the operation less trying, when the kidney is left untouched and the ureter is drawn out and sutured to the skin. He reports a case in which this was done; the pains and tenesmus were relieved at once and the man is in fairly good condition, his portable urinal working tolerably although its functioning might be improved. This patient, a man of 36, had had one kidney removed for tuberculosis over six years before. In another case he tried to divert the urine directly from the remaining kidney which was much diseased, but anuria followed, to which the patient succumbed. The diseased kidney is not able to stand any operation, so that diversion of the urine by an operation on the ureter seems much more promising.

Correspondenz-Blatt für Schweizer Aerzte, Basel

February 20, XLII, No. 6, pp. 177-224

86 *Phlegmonous Gastritis. (Zur Kenntnis der Gastritis phlegmonosa.) L. Bossart.

86. **Phlegmonous Gastritis.**—Bossart reports a case with necropsy and reviews the history of phlegmonous gastritis from Borel's description in 1656 to date; a total of 110 cases are on record. In the majority of cases the symptoms developed suddenly as an idiopathic affection, while in other cases there had been preceding disturbances on the part of the stomach. In eleven cases habitual liquor drinking was an important factor and poisoning in ten others; articular rheumatism and pulmonary tuberculosis were possibly connected with the affection in some cases. The phlegmon had developed after an operation on the stomach in five cases. In a case reported by Schwartz the phlegmon in the stomach was traced to an ulcerative tonsillitis. There are no pathognomonic symptoms, but the diagnosis was suggested in Bossart's case by the fact that movements did not aggravate the pain. His patient was much debilitated, and had much pain, vomiting and diarrhea, with great local tenderness and occasional clouding of the mental faculties and extreme restlessness, but he had walked to the hospital. The fact that the pain is not aggravated by movement is characteristic, as also the striking psychic and motor restlessness and dread, and alternation of this restlessness with stupor, and the fact that the fever and general symptoms are generally much more intense than

with ordinary gastritis or circumscribed peritonitis. The prognosis is graver in the acute than in the chronic cases. Recovery is known in only eleven of the total 110 cases; in these the abscess or phlegmon spontaneously emptied its contents into the stomach. Pus in the vomit suggests that this may have happened. Operative treatment was applied only to six patients but three of them recovered. One was a woman of 36, six months pregnant. In König's case, reported last year, the stomach was resected for supposed cancer, but the trouble proved to be a suppurative infiltration in the stomach wall. The findings in the eighty-eight necropsies on record show that erosions in the cardial part of the esophagus seem to be the portal of entry for the infection.

Deutsche medizinische Wochenschrift, Berlin

February 22, XXXVIII, No. 8, pp. 345-392

87 *Personal Prophylaxis of Venereal Disease. (Ueber die persönliche Prophylaxe der Geschlechtskrankheiten.) K. Zieler.
88 Salvarsan in Anthrax. (Wirkung des Salvarsans auf den Milzbrand.) S. Bettmann and Laubenheimer.
89 Salvarsan in Bilharziasis. (Salvarsanwirkung bei Bilharziose.) F. Fülleborn and F. E. L. Werner.
90 Technic for Application of Radium Emanations in Therapeutics. (Therapeutische Methodik der Radiumemanation.) P. Lazarus.
91 *Toxicity of Methyl Alcohol. (Giftigkeit des Methylalkohols.) E. Harnack.
92 Paroxysmal Hemoglobinuria. (Zur Kenntnis der paroxysmalen Hämoglobinurie.) T. Kumagai and B. Inoue.
93 Swing Extension in Treatment of Fracture of the Leg. (Zur Extensionsbehandlung der Beinbrüche.) L. Heusner.
94 *Technic for Removing Cancer of the Rectum. (Die kombinierte Operation bei Mastdarmkrebs.) H. Riese.
95 Bacteriologic Diagnosis of Diphtheria. (Zur bakteriologischen Diagnose der Diphtherie.) Schopohl.
96 Chemicals with Selective Affinity for Tumor Substance. (Tumoraffine Substanzen.) C. Neuberg and W. Caspari.

87. Personal Prophylaxis of Venereal Disease. — Zieler emphasizes that the measures which will prevent gonorrhea will not ward off syphilis and vice versa, and that this must not be forgotten in personal prophylaxis for which he gives minute directions. He also urges that physicians should constantly inculcate the necessity for thorough daily cleansing of the external genitals in both sexes, even in children. The multiplicity of secreting glands and the decay of their secretions are liable to induce irritation and minute lesions which open portals to infection of all kinds.

91. Toxicity of Methyl Alcohol.—Harnack's research has shown that methyl alcohol in itself is not very toxic, not nearly so much so as the allied alcohols containing more carbon. But it becomes extremely toxic from the feature peculiar to it, namely, its gradual oxidation into formic acid in the tissues. As this alcohol seems to have a special affinity for certain nervous elements, the slow gradual oxidation thus occurs in these elements. It is this which confers on methyl alcohol its peculiarly dangerous properties and these properties seem to be particularly baleful for human beings.

94. Combined Method of Removing Rectal Cancer.—Riese has applied Kraske's abdominodorsal technic in eleven cases. His first four patients died soon after the operation but only one of the last seven. He discusses the special indications for this technic and certain minor points. Its special advantages are the control of hemorrhage, the small loss of blood and the accessibility of the high lymph-nodes. It permits operative relief in cases inoperable by the dorsal route alone. Naturally the more serious cases are reserved for this technic so that the outcome can scarcely be compared with that under other methods. Kraske, Rotter and Kümmel have reported over 40 per cent. mortality, but Mozkovicz has had no deaths in his last six cases. In conclusion Riese reports a case in which he perforated the rectum with the proctoscope in examining a woman of 40, in the knee-elbow position, seeking to discover the cause of hemorrhagic diarrhea. He found it impossible to suture the intestine through a laparotomy and after rinsing out the abdominal cavity and making a circular incision in the fold of the pouch of Douglas, he exposed the rectum from the rear by removal of the coccyx. He was then able easily to suture the bowel, the patient on her side. He then turned her on her back and sutured the peritoneal and abdominal incisions. This point, where the peritoneum in the pouch of Douglas folds back on the rectum is peculiarly liable to be perforated in proctoscopy—Sultan has reported a case of the kind, he says—and he extols the advantages of the above technic for repair.

Jahrbuch für Kinderheilkunde, Berlin

February, LXXV, No. 2, pp. 131-264

97 *Salvarsan in Treatment of Inherited Syphilis in Infants. (Klinische Beobachtungen bei der Salvarsanbehandlung syphilitischer Säuglinge.) C. T. Noeggerath.
98 *Dispensary Tuberculin Treatment of Scrofula and Tuberculosis in Children. (Versuch einer poliklinischen Tuberkulinbehandlung der kindlichen Skrofulose und Tuberkulose.) H. Wittich.
99 Scarlet Fever. (Ueber Scharlach.) K. Preisich.
100 *Syphilitic Leptomeningitis in Infants. (Zur Kenntnis der luetischen Lepto-Meningitis beim Säugling.) E. Rach.
101 Temperature of the Prematurely Born. (Zur Lehre von der Temperatur der Frühgeborenen.) F. Masay.

97. Salvarsan in Treatment of Syphilitic Infants.—Noeggerath reports his experiences in this line with twenty-eight infants; nine died. The rapid symptomatic efficacy of the drug was confirmed in his cases, and in nine of the sixteen infants under observation for a number of months no further signs of syphilis could be detected; in seven the Wassermann reaction was still positive at the later examination. A combination of salvarsan and mercury seemed to give the best results.

98. Dispensary Tuberculin Treatment of Tuberculosis.—Wittich reports the history of sixty children with scrofula or other manifestations of tuberculosis given tuberculin treatment as outpatients. The outcome speaks strongly in favor of small, slowly increasing doses of tuberculin as a systematic method of treatment for children. The signs of scrofula disappear, the appetite returns, the weight increases, the children cease to cough and there is no further diarrhea or pain in the chest and the tendency to night sweats is entirely or partly arrested, while the general health shows marked improvement. Only three of the thirty-four children whose cases are reported in detail failed to benefit by the treatment.

100. Syphilitic Leptomeningitis in Infants.—The experiences related by Rach demonstrate that the discovery of the pale spirochete in the lumbar puncture fluid, when none can be found in the blood, may explain the symptoms observed as a true florid and severe syphilitic affection of the central nervous system.

Medizinische Klinik, Berlin

February 25, VIII, No. 8, pp. 303-342, and Supplement

102 *The Cardiovascular System and Pregnancy. (Kreislauf und Schwangerschaft.) R. T. Jaschke.
103 Diphtheria at Rostock. (Die zurzeit herrschende Diphtherieepidemie.) F. Lux.
104 Vaccine Therapy. (Allgemeines und Besonderes über Vaccinetherapie.) A. Menzer.
105 *"Bloodless Bloodletting." (Der "unblutige Aderlass"—Phlebostase.) S. Lilienstein.
106 Tuberculin Treatment in General Practice. (In welcher Weise führt der praktische Arzt am besten eine Tuberkulinkur durch?) M. Holtzensen and M. Wilms.
107 Localization of Varicose Leg Ulcers. (Zur Lokalisation des Ulcus cruris varicosum.) K. Freuder.
108 Color Reaction in Urine Differentiates Serum Exanthem from Scarlatinal Eruption, Which It Resembles. (Scharlachartige Serumexantheme und ihre Unterscheidung vom echtem Scharlach durch die Ehrlichsche Amidobenzaldehydreaktion im Harn.) F. Umber.
109 Starting Point for Extrasystoles. (Ursprungsort der Extrasystolen.) G. F. Nicolai.
110 *Present Status of Treatment of Suppurative Meningitis. (Ueber den gegenwärtigen Stand der Therapie der eitrigen Meningitis.) F. Henke.

102. The Circulation and Pregnancy.—Jaschke concludes his postgraduate lecture on this subject with the statement that the picture has been painted altogether too black in respect to the influence of a pregnancy on an existing heart defect. The statistics to date have been based on the exceptional cases. He found the mortality only 4 per cent. among 1,548 parturients with valvular defects in a total of 37,000 maternity cases. In the fatal cases there were generally other factors so that the connection between the valvular defect and injury from the pregnancy was scarcely determinable. Pure uncomplicated valvular defect need not be regarded too seriously from the standpoint of pregnancy. Even the extent of the defect, aside from mitral stenosis, is generally of comparatively little importance. In seven-eighths of all the cases

delivery occurred at term, and the woman was prematurely delivered only in 8 or 9 per cent. of the total; in the literature the proportion is estimated at from 20 to 50 per cent. When compensation is failing, the tendency to premature delivery increases, which may be regarded as a natural self-correcting tendency. In only about 1 per cent. did it become necessary to interrupt the pregnancy; this should be done only when compensation cannot be restored by internal medication, or when there is complicating nephritis or laryngeal tuberculosis. If it becomes necessary to interrupt the pregnancy, measures should be taken to prevent further conception. A premature delivery at the eighth month makes more demands on the heart than a childbirth at term. Under careful supervision the physician should wait, ready to deliver the woman at need by anterior hysterotomy, but he should bear in mind that 98 per cent. of all the births with heart defects occur spontaneously at term. There is danger in expectant waiting only when the myocardium itself is severely damaged, and to determine this is the main point. There is generally plenty of intact heart muscle left, sufficient to carry the patient through several pregnancies.

105. **Bloodless Bloodletting.**—Lilienstein found accidentally in examining the blood-pressure of an elderly man that the patient experienced great relief when the cuff was left on his arm longer than usual. On this suggestion Lilienstein had an appliance made with four cuffs, all connected with the manometer and air bulb, applying a cuff to each arm and leg and pumping air into them until the radial pulse became imperceptible, maintaining the compression for two or three minutes, and repeating the procedure four or five times. The blood in the limbs is thus shut off from the trunk, and the heart is left free to work with merely the blood left in the trunk. This gives it a great rest and relief, and enables it to catch up with its task in general and to go on thereafter far better from every point of view. He calls this method bloodless bloodletting or phlebostasis, and the quadruple cuff appliance, the phlebostat. Nine typical cases of arteriosclerosis with myocarditis or mitral insufficiency or dilatation of the aorta and hypertrophy of the heart are reported to show the benefit derived from the procedure. In the healthy no appreciable action on the heart or circulation is evident but with cardiovascular disease the heart murmurs become modified, dyspnea and oppression, headache and vertigo subside and the patients experience immense relief; in none of the cases did the disturbances afterward reach the height attained before. Nervous and hysteric heart affections are not influenced, so that the measure is sometimes a valuable aid in differentiation. The indications for phlebostasis are the same as for venesection, he says; the contra-indications seem to be limited to a tendency to thrombosis, and edema or varices in the limb.

110. **Meningitis.**—Henke emphasizes in this monograph on suppurative meningitis that treatment to have any chance for success must be applied early and kept up energetically. As long as the affection is merely a diffuse seropurulent meningitis, repeated lumbar puncture and systematic administration of hexamethylenamin may cure. He reports a typical example of the disease with a favorable outcome. The nystagmus and vertigo accompanying a cholesteatomatous otitis when the patient was first seen denoted some involvement of the labyrinth. Hexamethylenamin was given as a prophylactic before the radical operation on the ear; the operation seemed to spread the inflammatory process to the entire labyrinth, possibly by the concussion from the chiseling; the patient became quite deaf and suddenly, the fourth day, intense headache developed, with pains in the sacral region, fever, rigidity of the neck and Kernig's sign. Four lumbar punctures released a total of 115 c.c. of cloudy fluid containing pus and diplococci. The hexamethylenamin was kept up systematically, and all the symptoms gradually subsided. After expulsion of a sequester, which proved to be the cochlea, the patient recovered, cured of both meningitis and otitis. In this case, as also in Stockmayer's clinical experiences and in Crowe's animal experimentation, suspension of the hexamethylenamin was followed each time by exacerbation of symptoms.

Münchener medizinische Wochenschrift

February 20, LIX, No. 8, pp. 401-456

111 *An Idiosyncrasy to Drugs Not a True Anaphylaxis. (Ist die Idiosynkrasie gegen Arzneistoffe als echte Anaphylaxie aufzufassen.) K. Zieler.

112 Bacterial Action of Silver Salts in Saline Medium. (Ueber den Vorgang der bakteriziden Wirkung der Silberpräparate in kochsalzhaltigen Medien. II.) O. Gros.

113 *Examination for and Treatment of Tonsillitis with Polyarthritis. (Neues über Untersuchung und Behandlung gewisser mit Polyarthritis causal verknüpfter Tonsillitiden.) P. Roethlisberger.

114 Stroganoff's Prophylactic Treatment of Eclampsia. (Behandlung der Eklampsie nach Stroganoff.) B. Zoeppritz.

115 *Ischemic Contracture and Acute Diffuse Gangrene. (Symptomatologie der Entstehung ischämischer Kontraktur und der akut diffusen Gangrän.) B. Bardenheuer.

116 Fat in Uterine Muscle. (Ueber den Fettgehalt des Sarkoplasmas der glatten Muskelfasern des schwangeren und puerperalen Uterus.) B. Huguenin.

117 Contractions of Pylorus Under Palpation. (Die Kontraktionsphänomene der Pars pylorica bei palpatorischer Exploration.) T. Hausmann.

118 *Importance of Heredity in Development of Heart Disease. (Ueber den Einfluss der Heredität auf die Entstehung von Herzkrankheiten.) M. Herz.

119 Baseless Claims for Antimeristem in Cancer. (Zur Beurteilung der Schmidtschen Krebshypothese.) v. Wasielewski and Walker.

120 Case of Scopolamin Poisoning. (Fall von Skopolaminvergiftung.) R. Zimmermann.

121 Disproportion Between Slow Pulse and High Temperature as Sign of Salpingitis. (Ein Symptom für Salpingitis.) W. Kühl.

111. **Is Idiosyncrasy to a Drug a True Anaphylaxis?**—Zieler answers his question in the negative, basing this conclusion on the results of treating animals with serum from patients with an idiosyncrasy, as he relates in detail.

113. **Tonsillitis Associated With Rheumatism.**—Roethlisberger insists on the inadequacy of mere visual inspection of the tonsils and even of exploration with a sound or probe. The only means to examine the tonsils thoroughly, he says, is with the finger, squeezing out the contents of the cysts, applying this massage in cases of rheumatism, acute or chronic, two or three times a day or even oftener. If an operation becomes necessary, this massage is an excellent preliminary. It is an easy matter, he says, to introduce the right forefinger, along the wall of the cheek to the right tonsil or the left finger to the left tonsil and massage it and squeeze out the contents of the crypts. Sometimes the tonsil is found apparently sound but adherent. Scraps of purulent or cheesy matter frequently adhere to the finger when the tonsil was apparently sound on the first examination. If the tonsil feels hard and tender and yet no secretion can be expressed, an incision is necessary to release the confined contents of the follicle involved. He found it a frequent experience that specialists to whom he referred such patients either declared that there was nothing wrong or else foci were left behind after their operation; systematic massage of the tonsil with the forefinger answered the purpose even better than the single specialist operation in many cases. He thus was led to adopt the method as a routine measure in treatment of patients with acute or chronic rheumatism. By clearing out the tonsils in this way and putting an end to all trouble except possibly inaccessible foci, conditions are made much more favorable for surgical intervention on the tonsils if it is found necessary; it is thus directed to the exact point where it is needed. After the massage the tonsil frequently is reduced to a very small, soft, comparatively flat body with little chance left for accumulations in its follicles. In a case reported in detail, some of the joints of a young woman with an inherited tendency to gout became very stiff and painful, some of them much enlarged. The tonsils were found large and tender. Treatment consisted of internal medication and massage once or twice daily of the tonsils and joints affected. In eighteen days the tonsils and joints were nearly normal.

115. **Prophylaxis of Acute Diffuse Gangrene.**—Bardenheuer reports recent experiences which have confirmed his previous statements in regard to the importance of obstruction of the veins as the main factor in the development of ischemic contracture and of acute diffuse gangrene. As long as the veins are able to carry off the blood laden with carbon dioxid, no gangrene follows, but when this becomes impossible from subfascial constriction of the veins, the carbon dioxid accumulates and this has a most destructive action on the fixed tis-

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sue cells. There is grave danger in delay when this point is reached; the limb should be massaged, exercised and kept high. The same applies also to arteriosclerotic gangrene; the arterial circulation may have been long impeded, the pulse in the arteries almost imperceptible for months or years, the feet alternately hot or cold, blue or bluish or red, and yet there is no tendency to gangrene as long as the veins are able to convey away the deadly carbon-dioxid laden blood. When a tendency to gangrene becomes apparent, it may be arrested by promoting the venous circulation by massage, exercise, warm cataplasms to the calf of the leg, and dipping the foot alternately in hot and cold water. When all such measures fail, the diffuse gangrene can no longer be averted.

118. See Abstract 127 in THE JOURNAL, March 23.

Wiener klinische Wochenschrift, Vienna

February 22, XXV, No. 8, pp. 291-330

122 *Filling for Gap in Skull. (Schädelplombe bei Eingriffen an der Gehirnbasis.) J. P. Karplus.
123 *Technic for Removal of Entire Stomach. (Gastrectomia totalis.) S. Verson.
124 *Acute Leukemia. H. K. Barrenscheen.
125 Case of Lymphogranulomatosis. H. K. Barrenscheen.
126 Tuberculin in Treatment of Laryngeal Tuberculosis. (Kehlkopftuberkulose, Tuberkulin und lokale Behandlung.) F. Hutter.
127 *Acute Polyserositis. (Morbus Bamberger acutus.) J. Cecikas.

122. **Plugging the Gap After Operations on the Skull.**—Karplus has found that the opening in the base of the skull can be effectually and harmlessly closed by fitting into the gap a filling made of rubber moulded to fit, according to dentists' technic. He dried the edges of the bone with the thermocautery and then ran the cautery around the edges after the filling was introduced, thus soldering it in place. The results on animals and the cadaver were unusually promising. The filling can be easily removed at any time or punctured to permit escape of secretions, while the plugging of the wound at once wards off danger of infection.

123. **Technic for Total Gastrectomy.**—Verson states that he removed the entire stomach in a dog which is now in perfect health a month later, and he advocates the special technic followed, namely, operating through the left pleural cavity and the diaphragm. The stomach can be most easily reached by this route and can be then readily isolated and removed including the pylorus and cardia. He operated under ether given by Giordano's trachéal insufflation apparatus. The skin was incised in the eighth interspace, the diaphragm in the center and down to the cardia. The duodenum was sutured to the esophagus with exceptional ease.

124. **Acute Leukemia.**—Barrenscheen reports the clinical course and necropsy findings in a case of *Staphylococcus aureus* sepsis with leukemic reaction on the part of the bone marrow. The patient was a woman of 38 and she died within a week from the first symptoms of the acute leukemia. Her brother was brought to the clinic not long after with typical lymphatic leukemia and it was learned that a cousin had died a year before from a similar affection.

127. **Acute Polyserositis.**—Cecikas' case of acute Bamberger's disease confirms the assumption that it is an affection of the endothelium and that its manifestations may occur wherever endothelial tissue occurs. In the present case the symptoms indicated involvement of the endothelium in the posterior cranial fossa, heart, internal ear and meninges. He thinks the primary source for the trouble was an old cavity in the left lung; in nearly all the cases on record there was some preceding pulmonary lesion. The brother of the patient had had pericarditis, which suggests a possible familial predisposition on the part of the endothelial tissue.

Zentralblatt für Chirurgie, Leipsic

February 24, XXXIX, No. 8, pp. 249-280

128 *Blocking the Local Nerves for Operations on the Trunk. (Ueber Leitungsanästhesie bei Nierenoperationen und Thorakoplastiken, überhaupt bei Operationen am Rumpf.) M. Kappis. (Zur Technik der Lokalanästhesie bei Thorakoplastiken.) E. D. Schumacher.
129 Local Anesthesia Plus the "Twilight Sleep" for Abdominal Operations. (Ueber Pantopon-Skopolamin-Lokalanästhesie bei Bauchoperationen, insbes. bei der Appendektomie.) F. Colmers.
*Tamponing the Abdominal Cavity. (Zur Tamponade der Bauchhöhle.) Wehl.

128. **Local Anesthesia for Nephrectomy and Other Operations on the Trunk.**—Kappis has removed the kidney in three cases and incised it in two others for calculi or pyelitis—all under local analgesia induced by blocking the nerves of the region by injection of a local anesthetic. He states that after considerable tentative work, he found the best and entirely safe technic to be injection of the anesthetic and epinephrin solution at the angle between the rib and the transverse process. The needle is introduced close to the lower margin of the rib, about 3.5 cm. from the median line. It is generally possible to palpate and locate one of the ribs in this way. The needle hits the bone at a depth of 4 or 5 cm. and the lower edge of the rib is felt for with the needle, and its tip is pushed farther in just below, slanting a little towards the median line and injecting the fluid in two or three directions. After one rib is thus located, it is easy to locate the others up and down, allowing about 3 cm. interval between them. He injected 10 c.c. of a 1.5 per cent. novocain-suprarenin solution at the eighth to twelfth dorsal vertebræ and the first and second lumbar. In fifteen minutes he could proceed to operate, cutting into the skin, soft parts and kidney without the patient's feeling it. Manipulation of the peritoneum caused slight pain, requiring a few drops of ether. The cooperation of the conscious patient was quite a help, and recovery was smooth, disturbed only by brief paresis of the intestine in one case. He was able to resect the ninth and tenth rib entirely and part of the fifth to the eighth and the eleventh—all without the slightest pain, and part of the pleura in another case. The avoidance of the injurious influence on the other kidney from general anesthesia is a great gain in these kidney cases, especially when the other kidney is not absolutely sound. In conclusion Kappis warns that scopolamin had better not be used in cases of kidney disease. He has had a number of disagreeable complications which he ascribes to the scopolamin used in some cases of prostatitis with pyelonephritis.

Schumacher reports thirty-five thoracoplastic operations done with nerve blocking anesthesia, using 100 or 200 c.c. of a 5 per cent. solution of novocain plus a little epinephrin. He injects the fluid at the angle of the rib, expelling 1 or 2 c.c. as the needle hits the bone, then working the tip down to below the rib and injecting 5 or 8 c.c. more. This blocks the nerves which just beyond this point bend upward. From an incision in the axillary line a long needle is inserted and pushed as far backward as possible along the lower margin of the ribs, injecting the fluid continuously as it goes along. In twenty of the thirty-five cases no further anesthetic was required for resection of the ribs; in the others a few drops of chloroform were given. No by-effects nor injury of any organs were observed in any instance.

130. **Tampon for Abdominal Operations.**—Wehl has found that gauze sprinkled with a mixture of equal parts of iodoform and calomel will not stick to the tissues like ordinary gauze, while it retains all its absorbent properties and has a slight antiseptic action. It seems to increase the secretion a little and hence should not be left unchanged over three or four days.

Zentralblatt für Gynäkologie, Leipsic

February 24, XXXVI, No. 8, pp. 225-256

131 *Treatment of Acquired Atresia of Female Internal Genitals. (Ueber senile Muttermundsatresie und zur konservativen Behandlung der Gynatresien.) Lichtenstein.
132 Placenta Prævia. (Zur Behandlung der Placenta praevia.) J. Thies.
133 Predetermination of Sex. (Die praktische Vorausbestimmung des Geschlechts beim Menschen.) O. Schöner.

131. **Senile and Other Atresia of the Genital Organs.**—In the first case reported senile changes in the external os uteri closed it up before the menopause in a woman of 51 who had borne ten children, the last eleven years previously. Severe symptoms including anuria developed in the course of a week, explained by the escape of over a pint of thick brownish blood when a catheter was finally worked through the os into the uterus. In a second case a girl of nearly 16 had severe menstrual pains but no discharge and the lower three-fourths of the vagina were found grown up, evidently the

result of a pneumococcus vaginitis in early childhood. The patient had never had any "children's diseases," merely pneumonia in infancy. The retained blood was evacuated through a laparotomy and, working from within outward, the vagina was made permeable. An important point is to separate the bladder from the cervix as the first step in such operations.

Zentralblatt für innere Medizin, Leipsic

February 24, XXXIII, No. 8, pp. 173-196

134 Chemical Changes in Degenerated Muscles. (Ueber die chemische Veränderung des Muskels unter dem Einfluss der Entartung.) G. Grund.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 18, XXXIII, No. 21, pp. 209-224

135 Comparative Efficacy of Various Antipneumococcus Serums. (Sul valore immunizzante comparativo di alcuni sieri antipneumococcici.) V. Puntoni.

February 29, No. 22, pp. 225-232

136 Vaccination Against Typhoid. (I più importanti processi di vaccinazione antitifica dal punto di vista pratico.) Cerrano.

Policlinico, Rome

February 18, XIX, No. 8, pp. 261-300

137 *Malaria in Children. (La malaria nell'infanzia.) V. Fusco.
138 Hernia as Industrial Accident. (Di alcune considerazioni intorno alle ernie da infortunio.) G. Domenichini.

137. **Malaria in Children.**—Fusco has been examining for malaria 147 children in the hospital at Grosseto during the three years ending with 1911. Grosseto is on the sea-coast half way between Rome and Leghorn, and the province has extensive salt marshes. He found that 90.9 per cent. of the children under the third year had malarial parasites in the blood, and 92.03 per cent. of those about 7 years old, while 74 per cent. of all the children had positive blood findings, the type of parasite not differing from those found in adults. It was surprising to find the parasite in many children apparently free from the slightest symptom of malaria and without any history of such. The malarial attacks in many of the infants came on without a chill or any vasomotor phenomena. In ten out of sixteen less than a year old, the onset of the fever was associated with vomiting or convulsions, but these were never observed in children over 7, their attacks resembling those of adults, with the inevitable chill. The blood findings were constantly negative in the still-born infants and in seventeen living newly-born infants of mothers with severe malaria. No parasites could be found in the blood, brain or spleen or in the blood in the placenta or umbilical cord in these maternity cases. This suggests that malaria is not congenital.

Riforma Medica, Naples

February 17, XXVIII, No. 7, pp. 169-196

139 Syphilis and Pregnancy. (Malattie infettive e gravidanza. Sifilide e gravidanza.) L. Mangiagalli.
140 Experimental Research on Effect of Reducing Size of Left Ventricle. (La limitazione della cavita del ventricolo sinistro e suo rapporto colla patogenesi dell'edema polmonare meccanico.) A. Montanari.

Brazil Medico, Rio de Janeiro

February 8, XXVI, No. 6, pp. 51-60

141 Biologic Studies of Trypanosomas. (Notas sobre a biologia do trypanosoma gambiense, equinum, congolense e equiperdum.) G. Vianna.

Semana Medica, Buenos Aires

January 25, XIX, No. 4, pp. 137-188

142 *Pulmonary Influenza. (Algunas consideraciones sobre la grippe pulmonar.) L. J. Facio.
143 Salvarsan in Syphilitic Disease of the Nervous System. (Sobre 50 casos de afecciones nerviosas sifiliticas y parasifiliticas tratados por el dioxidiamidoarsenobenzol.) C. Prelooni.

February 1, No. 5, pp. 189-240

144 Internal Version in Management of Shoulder Presentation. (Leyes y reglas para la version interna en las presentaciones de hombro.) J. A. Berutl.
145 Inflammation of the Liver of Appendicitic Origin. (Hígado apendicular.) M. F. Arguello.
146 The Art of Medicine Among the Chinese. (El arte medico en China.) J. Regnault.
147 *Vertex-Coccygeal Length as Index of Age of Fetus. (El diagnostico de la edad del embarazo por el metodo de Ahlfeld.) E. M. Villapadierna.

142. **Influenza Localizing in the Lungs.**—Facio comments on the manifold ways in which any or all parts of the lungs may be affected by influenza infection. In a case in a girl of 17 the influenza lesion was located in the right apex but all traces of trouble disappeared at the end of twelve days and the patient has been in apparently normal health since. He describes in detail two cases of extensive pulmonary localization of the influenza with speedy recovery, and a third case in which the patient, a man of 30, died, necropsy confirming the acute influenza pneumonia, enlargement of the spleen and myocarditis. In all such cases of influenza the nervous system, especially the pneumogastric, is extensively involved. This explains the tendency to vomiting, etc. Revulsion does not seem to do much good in influenzal lung affections, and the variability of the symptoms confirms the nervous factors. This in turn explains the benefit from stimulants, such as strychnin, in the nervous depression of influenza. The insomnia of influenza is an early and tenacious symptom and he says it indicates the involvement of the brain in the process.

147. **Determination of Age of Fetus.**—Villapadierna states that at the maternity in his charge at Madrid the majority of the births are illegitimate, and the women scheme to be admitted to the institution as long before the end of the pregnancy as possible in order to conceal their condition. For this reason they lie in regard to the date of the last pregnancy and the date when the first movements of the fetus were felt, trying to give the impression that term is close at hand, while it is the object of the institution to admit only those who are expecting to be confined soon and reject women whose pregnancy has several weeks yet to run, other things being equal. He has been studying the best means for determining the age of the fetus objectively, comparing the girth of the abdomen at the umbilicus in 564 women, with other findings, and tabulating the findings in ninety-four cases in which the vertex-coccygeal length of the fetus was determined. This latter measurement was found the only reliable means to estimate the age of the fetus; it was found surprisingly accurate, as is seen by comparison in the table of the vertex-coccygeal length with the actual number of weeks afterward before delivery. The vertex-coccygeal length is multiplied by 2, then 2 cm. is subtracted to allow for the thickness of the abdominal wall; the remainder is the actual length of the fetus. This for the Madrid material was 35.4 cm. at the seventh month; 38.4 cm. at the eighth month; 43.3 cm. at the ninth, and 45.5 cm. at the tenth month. [Edgar's corresponding figures ("Practice of Obstetrics," Second Ed. 1904, p. 89), are seventh month, 35-38 cm.; eighth month, 38-43 cm.; ninth month, 42-48 cm.; tenth month, 48 to 52 cm. Comparison of these two sets of figures may be useful in estimating the age of the fetus in a woman rather below the average size.]

Hospitalstidende, Copenhagen

January 4, LV, No. 1, pp. 1-24

148 Technic of Gastro-Enterostomy. (Lidt Gastroenterostomitekniк.) A. Madsen.

January 10, No. 2, pp. 25-56

149 Dupuytren's Contracture. (2 Tilfælde af Dupuytrens Kontraktur, opstaaet efter en akut Betændelse i Fascia palmaris.) H. Kærn.
150 Hour-Glass Stomach. (Timeglasventriklen.) S. and J. Nordentoft. Commenced in No. 1.

January 17, No. 3, pp. 57-80

151 Familial Kidney Disease. (Nyrebetændelse med familiær Optræden.) K. A. Heiberg.
152 Bactericidal Action of Radium Emanation Not Due to Ozone Production. (Undersøgelser over, om Radiumemanationens Baktericiditet skyldes Ozonudvikling.) H. Jansen and O. Strandberg.

January 24, No. 4, pp. 81-108

153 *Sinus Thrombosis. (Kaulstisk Bidrag til den otogene, aseptiske Sinusthromboses Patologi og Klinik.) L. Mahler.

153. **Aseptic Sinus Thrombosis.**—Mahler states that he has been able to find only three cases on record of aseptic otitic thrombosis of the transverse sinus, and he adds another to the group. The thrombosis was evidently of purely toxic origin.

Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on the second, fourth or sixth advertising page following.